Table of Contents

SANSEVIERIA

Page No.

Fertilizer Rate Experiment 1
Results on ½" Break and other Data 2
Nitrogen Fertilizer Experiment 3
Results on ½" Break and other Data 4
Fertilizer Ratio Experiment 5
Results on ½" Break and other Data 7
Liming Experiment 9
Results on ½" Break and other Data 10
Phosphate Rate Fertilizer Experiment 11
Trace Elements Experiment 12-14
Result on ½" Break and other Data 15-17
Data from variety observation plots of Sansevieria on different Soil Types 18
Variations in yield of Green Material from plots of S. guineensis 19
Loss of Fiber when 1, 2, 3 and 4 inches of Sansevieria Leaf is cut off 20-21
Yields of Sansevieria guinaensis on large Decorticator after rebuilding 22
Initial Tests on Decorticator after rebuilding 23
Distribution of Leaves of S. guineensis according to length in Control Sample vs Truck Load 24
Costs of weeding ½ acre of S. trifasciata by hand for 12 months 26
Quality Tests on Sansevieria varieties 27
Quality Tests on Fertilizer Rate Study, Ft. Myers, Fla. 29
Quality Tests on " " " Manatee, Fla. 31
Comparison of Individual Leaves of S. trifasciata 32-35
Results of Tests of Storage Sample: Sansevieria, Kenaf and Sisal 36-38
Individual Leaf Study of *Furcraea gigantea* 39-48

Ramie

Phosphate-Potash Fertilizer Experiment on Ramie at Newport Industries, Inc., 49-50
Nitrogen Fertilizer Experiment on Ramie8 51-52
Time of Application of Fertilizer Experiment on Ramie 53
Ramie Variety Tests in the Fiber Nursery of the Everglades Experiment Station 54-59
Miscellaneous Fiber Plantings in Fiber Nursery 60-62

Kenaf

Nitrogen Fertilizer Experiment on Kenaf at Vero Beach 63-64

Yucca

Decortication of Yucca on Japanese Hand Machine 65-74

Fiber Crop Investigations

State Project 206 76-80

SANSEVIERIA

Pages 1 - 17 show the results obtained from six fertilizer experiments in the new ground area. All of these experiments were harvested for the first time in November and December 1949. All treatments are replicated three times, except the Nitrogen Fertilizer experiment, which contains only single treatments. Half of each plot was left for harvesting in December 1950. The data in this report dealing with fiber quality was obtained in January 1949 from 5 leaf samples. Additional quality results will be obtained in the summer of 1950 from the samples harvested in December, 1949. The age of the leaves at harvesting was approximately 20 months. All leaves were graded into two classes; those 20 inches long or longer and those less than 20 inches long. Wide variations in yield between plots receiving the same treatment are due primarily to frost damage in December, 1948 and January, 1949.
After grading the leaves, representative samples of leaves 20 inches long and longer were taken from each plot and decorticated on the hand machine. From the shorter leaves, samples were taken from each plot in one replicate only. This material was retted and the total fiber content determined. In all of these experiments fertilizer was applied only once in the Spring of 1949.

Page 1 shows the results obtained from the Fertilizer Rate Experiment in which four rates of a standard 4-7-5 fertilizer are compared. Highest yields were obtained with the 1500 lb. treatment. Also on page 2 it will be noted that this treatment gave the greatest strength.

Page 3 shows the results obtained when 3 levels of Nitrogen and different sources of Nitrogen are compared. In this experiment the organic sources of Nitrogen are generally superior to the inorganic sources though Ammonium Sulphate does exceed Millorganite at all three levels. However, the Millorganite plots were badly damaged by frost so that the difference shown here may not show up in the 1950 harvest. Uramon gave the best results of any treatment. This experiment was altered slightly in the Spring of 1949 in that Millorganite was substituted for 4-7-5 and Ammonium Sulphate for Ammonium Nitrate so that two sources of organic could be compared with two sources of inorganic. The quality results on page 4 show that Uramon gives not only highest yield but also greatest strength.

Pages 5 and 6 show the results of the Fertilizer Ratio Test in which the levels of N & K are 4, 8, and 12 percent While P is held constant at 8 percent. In this experiment the higher levels of Nitrogen give distinctly superior yields to lower Nitrogen levels. Although the 8-8-4 gives the highest average yield per acre, the 12-8-8 in the third replicate, plot 29 is unduly suppressed by frost damage so that this particular treatment may show better results in 1950 than the 8-8-4. The quality results of this experiment on pages 7 and 8 show that the average strength is greatest with the highest level of Potash, namely 12 percent. No apparent significent differences exist between the 4 & 8 percent levels of Potash. There is a steady decrease in strength as the Nitrogen levels are increased, the averages being 57,478 lbs. per sq. in. for the 4 percent level, 56,666 for the 8 percent level and 54,511 for the 12 percent level.

Page 9 shows results obtained when 4 levels of lime are applied. The 2,000 lb. treatment gives highest yields although all of the yields in this experiment are poor, partly due to the fact that sufficient Nitrogen was not applied to obtain best results. The quality results on page 10 show that the 2,000 lb. rate gives highest strength.

The results from the Phosphate Rate Experiment on page 11 are also poor, due partly to insufficient Nitrogen and to severe frost damage. The severity of the frost damage prevented quality studies being made on this experiment.

Page 12-14 show results from the Trace Element Experiment. The erratic frost damage and the probable lack of sufficient Nitrogen for maximum growth makes it difficult to draw any conclusions from this experiment. All treatments except 4 exceed control in yield and it is definitely known that in these 4 treatments a major cause for low yield was frost damage. This is especially true of the MNCUZNBO treatment. The quality results on pages 15-17 show that only one treatment, MNCU, exceeds control in strength. All other treatments are less than control.

Page 18 shows the yields of Sansevieria of different varieties and varying ages on different soil types. The most promising results on the muck soil were obtained with S. longiflora which gave slightly over one ton of fiber per acre in 10 months. Greatest yields were obtained on Leon Fine Sand with S. trifasciata 4 years old and with S. longiflora 3 years old.

Page 19 shows variations in yield of green material from plots of Sansevieria Guineensis 3 years old. The area of each plot was 25 sq. ft.

Page 20 shows the results obtained by decorticating leaves of varying length from 2 varieties of Sansevieria. Green weight increases with increase in leaf length in both varieties. However, % fiber does not increase significantly with increase in leaf length in S. Guineensis. in S. trifasciata a steady increase is noted.

Page 21 shows the percent loss of fiber when 1, 2, 3 and 4 inches of Sansevieria fiber is cut off at the base. 20 inch leaves show greatest loss in both varieties when 4 inches of fiber is removed. In S. trifasciata a significant decrease in loss occurs with increase in leaf length. In S. Guineensis losses remain high even with the longest leaves.

Pages 23-25 show results obtained with large samples run through the decorticator after rebuilding. The results of these tests show that much greater loss occurs when leaves are fed into the machine tip first.

Pages 27-28 give results on certain quality studies of several varieties of Sansevieria in which the samples are divided into three parts, base, middle and tip. S. Laurentii has stronger fiber in the tip of both old and young leaves. S. trifasciata and S. longiflora also show greater strength in the tip section.

Page 29 gives the results of quality studies from the Fertilizer Rate Study on S. Guineensis near Ft. Myers, Florida, on the West Coast. On the three inch break Uramon treatments give fiber of greatest strength except in one sample in Block I, 14A.

Page 30 shows the results obtained from 5 samples harvested at Palmetto, Florida, North of Ft. Myers. These tests show that plots containing peas give slightly stronger fiber over no peas.

Page 31 contains results for fertilizer treatments at Manatee near Bradenton similar to those at Ft. Myers. In two replicates peas exceed all other treatments. Uramon in this experiment does not produce as good results as it did at Ft. Myers.

Pages 32-35 show the results of the comparison of individual leaves of S. trifasciata. There is a definite relation between weight of green leaf to length of leaf. % fiber increases generally with increase in length though not steadily. Yield of dry fiber follows the same general pattern as % fiber in its relation to length. There seems to be no positive correlation of strength to length of leaf as shown on page 35. Pages 36-38 are the results of storage tests on Sansevieria, Kenaf and Sisal.

Furcraea

Page 39 to 48 inclusive show results obtained with Furcraea at two locations on the West Coast. Each individual leaf on each plant was harvested, weighed and decorticated separately. Leaves were numbered consecutively beginning with the first leaf harvested at the bottom of the plant and proceeding towards the top. The average percent fiber is slightly higher at Ft. Myers than at Palmetto. Considerable variation occurs between plants at each location.

Ramie

In 1949 five major fertilizer experiments were initiated on ramie at Newport Industries, Inc., Canal Point, Florida. Three of these experiments were completed in 1949, the Phosphate-Potash Fertilizer Experiment, the Nitrogen Fertilizer Experiment and the Time of Application of Fertilizer Experiment. The NPK Fertilizer Experiment and the Ramie Variety Test were continued in 1950. Results of the first three experiments are shown on pages 49-53. In the Phosphate-Potash Experiment significant increases in total yield of fiber occur when double treatments of P & K are applied.
No significant increase in fiber YIELD occurs in the Nitrogen Fertilizer Experiment though it is of interest to note that the organic fertilizers give higher yields than the inorganic fertilizers. In the Time of Application of Fertilizer Experiment highest yield of fiber is obtained when the whole treatment is applied in one application before the first harvest.

Page 54-59 show the results obtained in 1949 from the Ramie Variety Tests in the Fiber Nursery of the Everglades Experiment Station. Several selections and introductions gave higher fiber yield than the Standard Commercial variety.

Miscellaneous Fiber Plantings

Results of the miscellaneous fiber plantings in the Nursery Garden at the Everglades Experiment Station are shown on page 60. One variety of jute, corchorus capsularis showed very promising results. Hemp also grew well but was destroyed by the hurricane in August. Several strains of Kenaf also showed promising results.

Kenaf

Pages 63 & 64 show the results obtained from a Nitrogen Fertilizer Experiment on Kenaf at Vero Beach, Florida. In this test Uramon applied as the only source of Nitrogen gives the highest yield of fiber.

Yucca

In the late fall of 1949 a series of Yucca samples were decorticated as a cooperative project with Dr. Webber in Riverside, California. The results of these tests are shown on pages 65-74.
Pages 76-80 is a copy of State Project 206, Fiber Crop Investigations.

FERTILIZER RATE EXPERIMENT ON SANSEVIERIA GUINIENSIS AT WINCHESTER FARM, BOYNTON — HARVESTED 11/28/49.

Plot No.	Ave. Height Inches	Number of Leaves Per Sq. Foot			Yield of Green Material - Tons Per Acre			Percent Fiber		Yield of Fiber Lbs. Per Acre		
		+20"	-20"	Total	+20"	-20"	Total	Decort.	Retted	+20"	-20"	Total
Control												
3		Nil	30	30	Nil	26.57	26.57	—	2.04	—	1084	1084
10		—	—	—	Nil	33.40	33.40	—		—		
12	20	—	—	—	6.34	19.40	25.74	1.28		162		
	20	Nil	30	30	2.11	26.46	28.57	1.28		162		
500 Lbs. 4-7-5 Fertilizer per acre												
5	26	6	39	45	20.04	48.79	68.83	1.60	1.99	625	1942	2567
6	23	—	—	—	16.55	44.43	60.98	1.56		517		
15	25	—	—	—	40.51	41.38	81.89	1.52		1256		
	25	6	39	45	25.70	44.87	70.57	1.56		799		
1000 lbs. 4-7-5 Fertilizer per acre												
4	27	15	42	57	56.63	55.84	112.47	1.55	1.93	1812	2155	3967
7	27	—	—	—	22.87	45.38	68.25	1.62		732		
11	26	—	—	—	25.20	37.96	63.16	1.62		806		
	27	15	42	57	34.90	46.39	81.29	1.60		1117		
1500 lbs. 4-7-5 Fertilizer per acre												
1	32	17	28	45	63.67	44.57	108.24	1.59	2.12	2063	1890	3953
8	31	—	—	—	52.64	56.63	109.27	1.63		1105		
14	32	—	—	—	63.17	42.26	105.43	1.63		2047		
	32	17	28	45	59.83	47.82	107.65	1.62		1938		
2000 lbs. 4-7-5 Fertilizer per acre												
2	30	16	19	35	45.38	32.67	78.05	1.61	1.92	1379	1255	2634
9	31	—	—	—	48.28	53.72	102.00	1.56		1468		
13	31	—	—	—	47.05	50.97	98.02	1.40		1430		
	31	16	19	35	46.90	45.79	92.69	1.52		1426		

RESULTS ON ½" BREAK AND OTHER DATA ON 5-LEAF SAMPLES FROM FERTILIZER STUDIES.
Leaves pulled January, 1949. Boynton, Fla.

FERTILIZER RATE EXPERIMENT ON SANSEVIERIA GUINEENSIS

Plot No.	Avg. Height Inches	Total wt. of 5 leaves Green material	Dry Fiber Wt. in Grams	% Turnout	½" Break 1,000 lbs./sq.in.
Control					
3	23	262.5	4.39	1.67	49,500
10	21	296.0	5.64	1.91	58,000
12	23	371.5	6.72	1.81	60,700
Avg.	22.3	310.0	5.58	1.80	56,666
500 lbs. 4-7-5 per acre					
5	28	458.0	9.28	2.03	65,000
6	26	336.5	6.77	2.01	60,600
15	27	367.5	5.49	1.50	56,200
Avg.	27	387.3	7.18	1.85	60,600
1,000 lbs. 4-7-5 per acre					
4	29	429.0	8.43	1.97	62,200
7	28	418.5	6.26	1.50	57,200
11	30	570.5	11.70	2.05	61,100
Avg.	25.6	472.7	8.46	1.84	60,166
1,500 lbs. 4-7-5 per acre					
1	32	592.5	11.20	1.89	65,300
8	34	625.0	10.71	1.71	56,400
14	32	544.5	10.09	1.85	69,300
Avg.	32.7	587.3	10.67	1.82	63,667
2,000 lbs. 4-7-5 per acre					
2	29	515.5	10.29	2.00	63,100
9	34	560.5	9.95	1.78	58,800
13	28	367.5	7.68	2.09	68,400
	30.3	481.2	9.31	1.96	63,433

Nitrogen Fertilizer Experiment on Sansevieria guiniensis at Winchester Farm, Boynton. Harvested 12/6/49.

Treatment	Plot Number	Ave. Height Inches	Number of Leaves Per Sq. Foot			Yield of Green Material - Tons per Acre			Percent Fiber		Yield of Fiber lbs. per acre		
			+20"	-20"	Total	+20"	-20"	Total	Decort.	Retted	+20"	-20"	Total
Control													
No Nitrogen fertilizer	5	—	—	—	—	Nil	24.50	24.50	—		Nil		
" " "	10	—	—	—	—	1.19	22.18	23.37	—		31		
" " "	15	22	3	25	28	7.41	22.22	29.63	1.30	2.01	193	893	1086
		22	3	25	28	2.87	22.97	25.84	1.30		75		
Uramon													
50 pounds Nitrogen per acre	2	33	—	—	—	74.18	43.41	117.60	1.83		2671		
100 " " " "	9	40	—	—	—	71.15	70.79	141.93	1.71		2561		
150 " " " "	14	42	29	37	66	122.69	59.17	181.86	1.86	1.73	4417	2047	6464
		38	29	37	66	89.34	57.79	147.13	1.80		3216		
Millorganite													
50 pounds Nitrogen per acre	1	30	—	—	—	9.61	35.75	45.36	1.89		325		
100 " " " "	7	24	—	—	—	44.73	64.84	109.57	1.59		1512		
150 " " " "	12	31	13	32	45	46.73	49.50	96.23	1.58	1.96	1579	1940	3519
		28	13	32	45	33.69	50.03	83.72	1.69		1139		
Sulphate of Ammonia													
50 pounds Nitrogen per acre	3	28	—	—	—	17.74	51.34	69.08	1.65		596		
100 " " " "	8	34	—	—	—	68.86	40.71	109.57	1.76		2314		
150 " " " "	11	36	15	31	46	56.36	50.23	106.59	1.64	1.97	1894	1979	3873
		33	15	31	46	47.65	47.43	95.08	1.68		1601		
						6							
Nitrate of Soda													
50 pounds Nitrogen per acre	4	27	—	—	—	29.41	63.48	92.89	1.40		888		
100 " " " "	6	29	—	—	—	42.26	63.60	105.86	1.69		1276		
150 " " " "	13	30	11	37	48	37.27	51.79	89.06	1.45	1.88	1126	1947	3073
		29	11	37	48	36.31	59.62	95.93	1.51		1097		

RESULTS ON ½" BREAK AND OTHER DATA ON 5-LEAF SAMPLES FROM FERTILIZER STUDIES.

Leaves pulled January, 1949. Boynton, Fla.

NITROGEN RATE EXPERIMENT ON SANSEVIERIA GUINEENSIS

Plot No.	Avg. Height Inches	Total wt. of 5 leaves Green material	Dry Fiber Wt. in Grams	% Turnout	½" Break 1,000 lbs./sq.in.
Control					
5	18	205.0	2.97	1.45	52,200
10	23	282.0	5.28	1.87	56,100
15	22	345.5	5.87	1.70	49,900
Avg.	21	277.5	4.71	1.67	52,733
4-7-5 Fertilizer					
3	24	270.0	4.63	1.72	59,200
8	27	324.5	6.47	1.99	65,000
11	27	384.0	6.60	1.72	53,200
Avg.	26	326.2	5.90	1.81	59,133
$NaNO_3$					
4	28	394.0	8.22	2.08	61,400
6	25	349.5	7.21	2.06	57,900
13	23	287.0	4.72	1.64	49,600
Avg.	25.3	343.5	6.72	1.93	56,300
NH_4NO_3					
1	30	370.0	5.83	1.58	57,700
7	32	415.5	9.06	2.18	63,100
12	30	450.0	8.50	1.89	58,500
Avg.	30.7	411.8	7.80	1.88	59,766
URAMON					
2	30	474.5	8.94	1.89	55,400
9	30	427.0	7.58	1.78	63,400
14	35	597.0	11.08	1.85	65,400
	31.7	499.5	9.20	1.84	61,400

Fertilizer Ratio Experiment on Sansevieria guiniensis at Winchester Farm, Boynton. — Harvested 11/29/49.

Plot No.	Ave. Height Inches	Number of Leaves Per Sq. Foot +20"	-20"	Total	Yield of Green Material - Tons per Acre +20"	-20"	Total	Percent Fiber Decort.	Retted	Yield of Fiber Lbs. Per Acre +20"	-20"	Total
Control												
3	—	—	—	—	Nil	20.42	20.42	—	—	Nil	—	—
15	—	0	27	27	Nil	30.49	30.49	—	1.97	Nil	1201	1201
23	—	—	—	—	Nil	15.68	15.68	—	—	Nil	—	—
		0	27	27	Nil	22.20	22.20	—		Nil		
4-8-4 Fertilizer												
6	28	—	—	—	34.41	55.32	89.73	1.43	—	1108	—	—
17	31	26	29	55	86.25	54.02	140.27	1.72	1.94	2777	2096	4873
26	32	—	—	—	89.30	55.32	144.62	1.68	—	2876	—	—
	30	26	29	55	69.99	54.89	124.88	1.61		2254		
4-8-8 Fertilizer												
10	26	—	—	—	25.27	55.76	81.03	1.68	—	879	—	—
18	28	9	26	35	35.41	59.01	94.42	1.71	1.95	1232	2301	3533
25	35	—	—	—	125.61	45.94	171.55	1.82	—	4373	—	—
	30	9	26	35	62.10	53.57	115.67	1.74		2162		
4-8-12 Fertilizer												
5	36	—	—	—	115.88	55.76	171.64	1.65	—	3940	—	—
16	33	29	25	54	115.88	47.05	162.93	1.81	2.01	3940	1891	5831
21	27	—	—	—	33.14	51.34	84.48	1.65	—	1127	—	—
	32	29	25	54	88.30	51.38	139.68	1.70		3002		
8-8-4 Fertilizer												
2	35	—	—	—	78.85	59.25	138.10	1.67	—	2712	—	—
14	40	37	30	67	178.96	44.29	223.25	1.78	1.98	6156	1754	7910
22	31	—	—	—	102.22	28.94	131.16	1.72	—	3516	—	—
	35	37	30	67	120.01	44.16	164.17	1.72		4128		

(Continued)

Fertilizer Ratio Experiment .... (Continued - Page 2)

Plot No.	Ave. Height Inches	Number of Leaves Per Sq. Foot +20"	-20"	Total	Yield of Green Material - Tons Per Acre +20"	-20"	Total	Percent Fiber Decort.	Retted	Yield of Fiber Lbs. Per Acre +20"	-20	Total
8-8-8 Fertilizer												
8	32	—	—	—	75.96	60.44	136.40	1.61	—	2370	—	—
11	34	17	29	46	69.26	47.05	116.31	1.54	1.63	2161	1534	3695
27	31	—	—	—	56.76	59.21	115.97	1.53	—	1771	—	—
	32	17	29	46	67.33	55.57	122.90	1.56		2101		
8-8-12 Fertilizer												
1	35	—	—	—	76.59	45.38	121.97	1.73	—	2543	—	—
19	36	18	30	48	77.26	51.89	129.15	1.72	1.85	2565	1920	4485
30	30	—	—	—	37.16	46.15	83.31	1.53	—	1234	—	—
	34	18	30	48	63.67	47.81	111.48	1.66		2114		
12-8-4 Fertilizer												
4	35	—	—	—	85.33	47.48	132.81	1.61	—	2679	—	—
20	30	8	34	42	27.67	46.21	73.28	1.40	2.25	850	2079	2929
24	40	—	—	—	132.72	46.56	179.28	1.69	—	4168	—	—
	35	8	34	42	81.71	46.75	128.46	1.57		2566		
12-8-8 Fertilizer												
7	36	—	—	—	89.10	43.96	133.06	1.66	—	2905	—	—
13	46	39	20	59	215.84	38.15	253.99	1.75	1.87	7036	1427	8463
29	32	—	—	—	62.08	66.75	128.83	1.48	—	2024	—	—
	38	39	20	59	122.34	49.62	171.96	1.63		3988		
12-8-12 Fertilizer												
9	33	—	—	—	63.01	50.88	113.89	1.69	—	1991	—	—
12	39	39	29	68	167.28	45.31	212.59	1.42	1.84	5286	1667	6953
28	31	—	—	—	60.12	53.58	113.70	1.64	—	1900	—	—
	34	39	29	68	96.80	49.92	146.72	1.58		3059		

RESULTS ON ½" BREAK AND OTHER DATA ON 5-LEAF SAMPLES FROM FERTILIZER STUDIES.

Leaves pulled January, 1949. Boynton, Fla.

FERTILIZER RATIO TEST ON SANSEVIERIA GUINEENSIS

Plot No.	Avg. Height Inches	Total wt. of 5 leaves Green material	Dry Fiber Wt. in Grams	% Turnout	½" Break 1,000 lbs./sq.in.
Control					
3	24	248.0	4.67	1.88	46,200
15	23	359.0	6.34	1.77	45,800
23	21	217.5	4.70	2.16	45,600
Avg.	22.6	274.8	5.24	1.94	45,867
4-8-4 Fertilizer					
6	33	619.5	10.65	1.72	50,300
17	34	488.5	7.95	1.63	57,600
26	31	463.5	8.32	1.80	59,200
Avg.	32.7	523.8	8.97	1.72	55,700
4-8-8 Fertilizer					
10	30	360.5	6.57	1.82	59,800
18	30	500.0	8.58	1.76	56,100
25	37	677.0	12.22	1.81	56,500
Avg.	32.3	512.7	9.12	1.79	57,467
4-8-12 Fertilizer					
5	35	519.0	8.50	1.64	53,700
16	34	581.0	9.62	1.65	59,700
21	30	480.0	7.98	1.66	64,400
Avg.	33	523.3	8.70	1.65	59,267
8-8-4 Fertilizer					
2	37	468.0	8.91	1.91	55,100
14	41	701.0	14.00	2.00	57,600
22	34	665.0	11.48	1.73	58,300
Avg.	37.3	611.3	11.46	1.88	57,000

Plot No.	Avg. Height Inches	Total wt. of 5 leaves Green material	Dry Fiber Wt. in Grams	% Turnout	½" Break 1,000 lbs./sq.in.
8-8-8 Fertilizer					
8	34	558.0	10.65	1.91	52,500
11	34	532.5	9.95	1.87	58,100
27	32	543.0	10.80	1.99	55,800
Avg.	33.3	544.5	10.47	1.92	55,467
8-8-12 Fertilizer					
1	35	569.5	9.53	1.67	53,400
19	38	874.5	17.55	2.01	62,400
30	25	457.5	7.41	1.62	56,800
Avg.	32.6	633.8	11.48	1.77	57,533
12-8-4 Fertilizer					
4	29	509.0	9.76	1.92	57,600
20	28	413.0	7.90	1.91	48,400
24	36	653.5	10.95	1.68	57,700
Avg.	31.0	525.2	9.54	1.84	54,567
12-8-8 Fertilizer					
7	35	459.5	7.71	1.68	52,400
13	46	1100.5	17.96	1.63	46,100
29	28	417.5	8.32	1.99	57,500
Avg.	36.3	659.2	11.33	1.77	52,000
12-8-12 Fertilizer					
9	30	364.0	5.12	1.41	50,400
12	36	655.0	11.09	1.69	60,600
28	29	433.5	8.31	1.92	59,900
Avg.	31.7	484.2	8.17	1.67	56,967

LIMING EXPERIMENT ON SANSEVIERIA GUINIENSIS AT WINCHESTER FARM, BOYNTON. -- HARVESTED 12/2/49.

Plot No.	Plant Height Inches	Number of Leaves Per Sq. Ft.			Yield of Green Material - Tons Per Acre			Percent Fiber		Yield of Fiber Lbs. Per Acre		
		+20"	-20"	Total	+20"	-20"	Total	Decort.	Retted	+20"	-20"	Total
Control												
3	26	7	36	43	23.96	44.43	68.39	1.80	2.07	819	1839	2658
8	23	---	---	---	19.60	35.53	55.13	1.50	–	670	—	—
12	28	---	---	---	50.23	50.23	100.46	1.82	–	1718	—	—
	26	7	36	43	31.26	43.40	74.66	1.71		1069		
500 pounds of Slaked Lime per acre												
1	23	11	32	43	7.62	41.38	49.00	1.69	1.93	232	1597	1829
7	24	---	---	---	10.53	37.03	47.56	1.29		320		
11	25	---	---	---	22.87	45.38	68.25	1.59		695		
	24	11	32	43	13.67	41.26	54.93	1.52		416		
1000 pounds of Slaked Lime per acre												
5	25	11	40	51	35.01	49.48	84.49	1.60	2.17	1232	2147	3379
10	23	---	---	---	48.08	55.08	103.16	1.73		1692		
13	27	---	---	---	37.57	45.74	83.31	1.94		1322		
	25	11	40	51	40.22	50.10	90.32	1.76		1415		
1500 pounds of Slaked Lime per acre												
2	23	4	34	38	6.94	42.88	49.82	1.44	2.14	222	1835	2057
9	26	---	---	---	39.64	61.42	101.06	1.78		1268		
15	24	---	---	---	27.29	28.44	55.73	1.57		873		
	24	4	34	38	24.62	44.25	68.87	1.60		788		
2000 pounds of Slaked Lime per acre												
4	31	19	54	73	71.88	77.48	149.36	1.67	2.01	2444	3107	5551
6	27	---	---	---	39.57	44.65	84.22	1.75		1345		
14	25	---	---	---	29.81	59.62	89.43	1.67		1014		
	28	19	54	73	47.09	60.58	107.67	1.70		1601		

RESULTS ON ½" BREAK AND OTHER DATA ON 5-LEAF SAMPLES FROM FERTILIZER STUDIES.

Leaves pulled January, 1949. Boynton, Fla.

LIMING EXPERIMENT ON SANSEVIERIA GUINEENSIS

Plot No.	Avg. Height Inches	Total wt. of 5 leaves Green material	Dry Fiber Wt. in Grams	% Turnout	½" Break 1,000 lbs. /sq.in.
Control					
3	25	329.0	5.46	1.66	50,800
8	24	313.0	6.26	2.00	62,400
12	26	316.0	5.13	1.62	54,200
Avg.	25	319.3	5.62	1.76	55,800
500 lbs. slacked lime per acre					
1	25	354.5	6.21	1.75	57,900
7	24	305.0	5.38	1.76	49,200
11	25	286.5	5.25	1.83	56,800
Avg.	24.7	315.3	5.61	1.78	54,633
1,000 lbs. slacked lime per acre					
5	26	390.0	7.77	1.99	58,500
10	28	390.5	8.55	2.19	64,100
13	33	504.0	7.98	1.58	55,600
Avg.	29	428.2	8.10	1.92	59,400
1,500 lbs. slacked lime per acre					
2	25	270.0	5.06	1.87	57,700
9	26	355.0	6.72	1.89	55,100
15	33	510.5	9.52	1.86	61,700
Avg.	28	378.5	7.10	1.87	58,166
2,000 lbs. slacked lime per acre					
4	34	510.5	7.38	1.45	64,300
6	28	411.5	6.69	1.63	58,600
14	29	442.0	8.79	1.98	61,800
Avg.	30.3	454.7	7.62	1.69	61,566

Phosphate Rate Fertilizer Experiment on Sansevieria guiniensis at Winchester Farm, Boynton. Harvested 12/7/49.

Plot No.	Ave. Height Inches	Number of Leaves Per Sq. Foot			Yield of Green Material - Tons per Acre			Percent Fiber		Yield of Fiber Lbs. per Acre		
		+20"	-20"	Total	+20"	-20"	Total	Decort.	Retted	+20"	-20"	Total
8-0-8 Fertilizer (Control)												
1	22	4	41	45	10.35	45.74	56.09	1.46	2.18	319	1994	2313
9	26	—	—	—	49.64	29.62	79.26	1.59		1529		
12	25	—	—	—	21.27	38.38	59.65	1.58		655		
	24	4	41	45	27.09	37.91	65.00	1.54		834		
8-4-8 Fertilizer												
3	21	5	27	32	16.63	29.70	46.33	1.57	1.93	519	1146	1665
6	25	—	—	—	22.47	38.15	60.62	1.51		701		
15	26	—	—	—	20.02	25.86	45.88	1.60		625		
	24	5	27	32	19.71	31.24	50.95	1.56		615		
8-6-8 Fertilizer												
2	26	7	39	46	28.51	49.30	77.81	1.52	2.20	873	2169	3042
8	20	—	—	—	7.00	29.41	36.45	1.42		214		
13	24	—	—	—	21.00	41.07	62.07	1.66		643		
	23	7	39	46	18.84	39.93	58.77	1.53		577		
8-8-8 Fertilizer												
4	24	6	23	29	20.81	38.24	59.05	1.53	2.28	637	1744	2381
10	22	—	—	—	7.94	42.01	49.95	1.52		243		
14	25	—	—	—	31.27	37.81	69.08	1.55		957		
	23	6	23	29	20.01	39.35	59.36	1.53		612		
8-10-8 Fertilizer												
5	27	10	59	69	36.83	63.56	100.39	1.49	1.86	1164	2364	3528
7	24	—	—	—	28.07	30.01	58.08	1.68		887		
11	24	—	—	—	16.34	28.01	44.35	1.58		516		
	25	10	59	69	27.08	40.53	67.61	1.58		856		

TRACE ELEMENTS EXPERIMENT ON SANSEVIERIA GUINIENSIS AT WINCHESTER FARM, BOYNTON. — HARVESTED 12/1/49.

Plot No.	Plant Height Inches	Number of Leaves Per Sq. Ft.			Yield of Green Material - Tons Per Acre			Percent Fiber		Yield of Fiber Pounds Per Acre		
		+20"	-20"	Total	+20"	-20"	Total	Decort.	Retted	+20"	-20"	Total
Control												
12	32	13	37	50	51.42	56.06	107.48	1.70	1.96	1604	2198	3802
21	21	—	—	—	13.07	50.40	63.47	1.47		408		
39	30	—	—	—	49.01	52.28	101.29	1.51		1529		
	28	13	37	50	37.83	52.91	90.75	1.56		1180		
Cu												
14	30	15	47	62	58.26	78.95	137.21	1.59	1.92	1806	3032	4838
27	25	—	—	—	21.11	46.24	67.35	1.46		654		
40	28	—	—	—	41.82	47.57	89.39	1.61		1296		
	28	15	47	62	40.40	57.59	97.98	1.55		1252		
Mn												
16	20	2	44	46	5.23	44.43	49.66	1.48	1.90	153	1688	1841
29	26	—	—	—	22.87	46.68	69.55	1.34		668		
38	31	—	—	—	82.49	29.40	111.89	1.56		2409		
	26	2	44	46	36.86	40.17	77.03	1.46		1077		
Zn												
10	34	19	28	47	70.65	54.72	125.37	1.66	2.14	2218	2342	4560
32	32	—	—	—	51.75	32.41	84.16	1.50		1625		
47	30	—	—	—	64.41	54.11	118.52	1.56		2022		
	32	19	28	47	62.27	47.08	109.35	1.57		1955		
Bo												
15	24	3	29	32	9.80	40.61	50.41	1.42	1.82	306	1478	1784
18	30	—	—	—	77.11	49.66	126.77	1.65		2406		
44	28	—	—	—	48.29	55.68	103.97	1.61		1507		
	27	3	29	32	45.07	48.65	93.72	1.56		1406		
CuZn												
7	31	16	21	37	66.92	38.81	105.73	1.54	1.96	2048	1521	3569
28	26	—	—	—	51.27	55.79	107.06	1.56		1569		
34	26	—	—	—	56.63	53.72	110.35	1.50		1733		
	28	16	21	37	58.27	49.44	107.71	1.53		1783		

(Continued)

TRACE ELEMENTS EXPERIMENT ON SANSEVIERIA GUINESIS (Continued — Page 2)

Plot No.	Plant Height Inches	Number of Leaves Per Sq. Ft. +20"	Number of Leaves Per Sq. Ft. -20"	Number of Leaves Per Sq. Ft. Total	Yield of Green Material - Tons Per Acre +20"	Yield of Green Material - Tons Per Acre -20"	Yield of Green Material - Tons Per Acre Total	Percent Fiber Decort.	Percent Fiber Retted	Yield of Fiber Pounds Per Acre +20"	Yield of Fiber Pounds Per Acre -20"	Yield of Fiber Pounds Per Acre Total
CuBo												
1	25	5	39	44	17.59	71.88	89.47	1.68	2.14	514	3076	3590
20	26	—	—	—	29.70	53.46	83.16	1.39		867		
43	25	—	—	—	13.07	43.12	56.19	1.30		382		
	25	5	39	44	20.12	56.15	76.27	1.46		588		
MnZn												
2	24	4	38	42	15.25	60.26	75.51	1.50	2.05	497	2471	2968
17	27	—	—	—	52.84	54.54	107.38	1.65		1722		
41	31	—	—	—	74.05	62.92	136.97	1.74		2414		
	27	4	38	42	47.38	59.24	106.62	1.63		1544		
ZnBo												
6	32	15	36	51	58.44	59.90	118.34	1.81	1.82	1894	2180	4074
30	30	—	—	—	54.61	48.54	103.15	1.67		1769		
42	26	—	—	—	23.52	50.71	74.23	1.37		762		
	29	15	36	51	45.52	53.05	98.57	1.62		1475		
MnCu												
8	31	20	31	51	81.68	54.14	135.82	1.58	1.85	2614	2003	4617
25	32	—	—	—	73.38	61.82	135.20	1.62		2348		
35	26	—	—	—	46.79	52.27	99.06	1.59		1497		
	30	20	31	51	67.28	56.08	123.36	1.60		2153		
MnBo												
9	37	17	37	54	83.50	76.42	159.92	1.67	2.05	2672	3133	5805
26	22	—	—	—	17.82	27.92	45.74	1.39		570		
36	26	—	—	—	24.16	46.73	70.89	1.74		773		
	28	17	37	54	41.83	50.36	92.18	1.60		1338		

14

TRACE ELEMENTS EXPERIMENT ON SANSEVIERIA GUINIENSIS (Continued — Page 3)

Plot No.	Plant Height Inches	Number of Leaves Per Sq. Ft.			Yield of Green Material - Tons Per Acre			Percent Fiber		Yield of Fiber Pounds Per Acre		
		+20"	-20"	Total	+20"	-20"	Total	Decort.	Retted	+20"	-20"	Total
CuZnBo												
4	24	4	47	51	14.85	60.59	75.44	1.51	1.96	454	2375	2829
19	26	—	—	—	50.71	51.23	101.94	1.48		1552		
48	28	—	—	—	28.75	69.00	97.75	1.61		880		
	26	4	47	51	31.44	60.27	91.71	1.53		962		
MnCuBo												
13	25	7	47	54	23.62	57.30	80.92	1.40	1.90	737	2177	2914
22	27	—	—	—	53.28	58.30	111.58	1.65		1662		
33	27	—	—	—	66.22	54.02	120.24	1.62		2066		
	26	7	47	54	47.71	56.54	104.25	1.56		1488		
MnZnBo												
3	33	26	29	55	102.69	49.48	152.17	1.74	1.99	3512	1969	5481
24	29	—	—	—	68.95	64.89	133.84	1.97		2358		
45	33	—	—	—	62.33	66.85	129.18	1.42		2131		
	32	26	29	55	77.99	60.41	138.40	1.71		2667		
MnCuZn												
5	28	12	35	47	41.14	49.37	90.51	1.71	1.64	1358	1619	2977
23	26	—	—	—	32.67	57.80	90.47	1.55		1078		
46	26	—	—	—	27.84	55.68	83.52	1.69		919		
	27	12	35	47	33.88	54.28	88.17	1.65		1118		
MnCuZnBo												
11	30	11	45	56	43.70	80.86	124.56	1.61	1.73	1346	2798	4144
31	25	—	—	—	20.11	51.27	71.38	1.40		619		
37	20	—	—	—	5.60	38.27	43.87	1.60		172		
	25	11	45	56	23.14	56.80	79.94	1.54		712		

RESULTS ON ½" BREAK AND OTHER DATA ON 5-LEAF SAMPLES FROM FERTILIZER STUDIES.

Leaves pulled January, 1949. Boynton, Fla.

MINOR ELEMENT STUDY ON SANSEVIERIA GUINEENSIS

Plot No.	Avg. Height Inches	Total wt. of 5 leaves Green material	Dry Fiber Wt. in Grams	% Turnout	½" Break 1,000 lbs. /sq.in.
Control					
12	25	415.5	8.06	1.94	50,800 (frost damage)
21	23	371.0	6.35	1.71	56,100
39	25	315.5	6.16	1.95	61,100
Avg.	24.3	367.3	6.86	1.87	56,000
ZN					
10	30	467.5	8.76	1.87	47,800 (frost damage)
32	26	360.0	9.03	2.50	57,900 " "
47	34	542.5	11.40	2.10	55,300 " "
Avg.	30	456.7	9.73	2.16	53,667
CU					
14	26	449.0	6.46	1.44	48,000
27	23	361.5	6.30	1.74	45,700 (frost damage)
40	28	468.5	7.64	1.63	48,900
Avg.	25.6	426.3	6.80	1.60	47,533
MN					
16	18	195.0	2.48	1.27	38,300 (break only)
29	21	315.0	5.65	1.78	47,200 (frost damage)
38	33	693.0	11.35	1.64	45,700
	24	401.0	6.49	1.56	43,733
BO					
15	23	297.5	5.52	1.86	46,900 (frost damage)
18	30	428.0	7.86	1.84	50,800
44	26	414.0	7.41	1.79	46,600 (frost damage)
	26.3	379.8	6.93	1.83	48,100

RESULTS ON $\frac{1}{2}$" BREAK AND OTHER DATA ON 5-LEAF SAMPLES FROM FERTILIZER STUDIES.

Leaves pulled January, 1949. Boynton, Fla.

Plot No.	Avg. Height Inches	Total wt. of 5 leaves Green material	Dry Fiber Wt. in Grams	% Turnout	$\frac{1}{2}$" Break 1,000 lbs./ sq.in.
CUBO					
1	30	472.0	9.61	2.04	53,800 (frost damage)
20	26	503.5	8.48	1.69	46,400
43	26	356.5	5.44	1.52	37,900 " "
Avg.	27.3	444.0	7.84	1.75	46,033
ZNBO					
6	34	556.5	10.15	1.83	48,200
30	31	452.0	7.79	1.72	46,400 (frost damage)
42	26	352.0	6.29	1.79	43,500 " "
Avg.	30.3	453.5	8.08	1.78	46,033
MNBO					
9	30	434.5	7.63	1.76	45,900
26	21	331.0	5.79	1.75	46,800 (frost damage)
36	30	488.0	8.33	1.71	45,100
	27	417.8	7.25	1.74	45,933
CUZN					
7	36	619.0	11.76	1.90	54,800
28	25	425.5	7.36	1.73	45,900 (frost damage)
34	31	534.5	8.66	1.62	44,900
	30.6	526.3	9.26	1.75	48,533
MNCU					
8	36	790.0	14.26	1.81	63,800 (frost damage)
25	33	541.0	8.52	1.57	58,500
35	31	564.0	9.79	1.74	53,900
	33.3	631.7	10.86	1.71	58,733

RESULTS ON ½" BREAK AND OTHER DATA ON 5-LEAF SAMPLES FROM FERTILIZER STUDIES.

Leaves pulled January, 1949. Boynton, Fla.

Plot No.	Avg. Height Inches	Total wt. of 5 leaves Green material	Dry Fiber Wt. in Grams	% Turnout	½" Break 1,000 lbs. /sq.in.	
MNZN						
2	27	291.0	4.96	1.71	44,000	
17	30	519.0	9.04	1.74	59,200	
41	31	534.5	6.38	1.20	43,700	
Avg.	29.3	448.2	6.79	1.55	48,967	
MNCUBO						
13	23	328.0	7.18	2.19	49,500	(frost damage)
22	30	514.0	8.05	1.57	51,700	
33	30	487.0	10.13	2.08	52,500	
Avg.	27.6	443.0	8.45	1.95	51,233	
MNZNBO						
3	36	923.5	16.58	1.80	54,400	
24	30	644.0	10.90	1.70	43,000	
45	27	342.0	6.89	2.01	45,300	(frost damage)
Avg.	31	636.5	11.46	1.84	47,567	
CUZNBO						
4	25	388.5	6.68	1.72	48,700	
19	30	514.0	9.04	1.76	62,700	
48	28	323.0	4.87	1.51	52,100	
Avg.	27.6	408.5	6.86	1.66	54,500	
MNCUZN						
5	31	580.5	10.98	1.89	56,700	(frost damage)
23	30	552.0	9.07	1.64	56,200	
46	29	368.0	7.06	1.92	46,000	" "
Avg.	30	500.2	9.04	1.82	52,967	
MNCUZNBO						
11	30	472.0	9.16	1.94	49,400	(frost damage)
31	26	501.0	9.55	1.91	51,100	" "
37	27	350.0	6.61	1.89	41,100	" "
Avg.	27.6	441.0	8.44	1.91	47,200	

18

DATA FROM VARIETY OBSERVATION PLOTS OF SANSEVIERIA ON DIFFERENT SOIL TYPES — 1949.

Plot No.	Age in Months	Plant Height Inches	Number of Leaves Per Sq. Ft.			Yield of Green Material - Tons per Acre			Percent Fiber		Yield of Fiber		
			+20"	-20"	Total	+20"	-20"	Total	Decort.	Retted	+20"	-20"	Total
Sansevieria guineensis													
(a) Leon Fine Sand													
1	36	36	20	19	41	119.79	37.03	156.82	1.63		3905		
2	36	26	21	23	44	81.03	25.26	106.29	1.49		2435		
(b) Everglades Peat Soil													
1	10	29	12	16	28	41.02	25.77	66.79	1.10		902		
Sansevieria trifasciata													
(a) Leon Fine Sand													
1	48	57	82	7	89	436.51	9.98	446.49	1.44		12571		
2	24	43	—	—	—	129.81	28.31	158.12	1.55		4024		
3	24	—	29	44	73	102.80	53.14	155.94	1.56		3207		
(b) Everglades Peat Soil													
1	10	29	15	23	38	54.74	34.85	89.59	0.88		963		
(c) Davie Fine Sand													
1	18	40	18	15	33	85.88	25.36	111.24	1.09		1872		
Sansevieria longiflora													
(a) Leon Fine Sand													
1	36	39	—	—	—	122.40	3.92	126.32	2.09		5116		
2	36	—	25	5	30	136.78	6.97	143.75	1.99		5444		
3	36	40	—	—	—	143.31	3.92	147.23	2.14		6134		
(b) Everglades Peat Soil													
1	10	36	—	—	—	88.98	26.01	114.99	1.14		2029		
Sansevieria laurentii													
(a) Leon Fine Sand													
1	48	46	57	3	60	322.62	13.16	335.78	1.17		7549		

VARIATIONS IN YIELD OF GREEN MATERIAL FROM PLOTS OF SANSEVIERIA GUINIENSIS

Plot No.	Green Material Tons Per Acre	Plot No.	Green Material Tons Per Acre
1	110.64	9	159.43
2	120.66	10	151.15
3	123.27	11	120.23
4	104.98	12	102.80
5	142.01	13	128.07
6	156.82	14	145.93
7	89.30	15	106.29
8	91.91	16	96.70
		Average	121.89

Location of Plots: South Bed, Winchester Farm, Boynton, Florida.

Soil Type: Leon Fine Sand.

Date of Harvest: October 20, 1949.

Age of Leaves: Three years.

6 March, 1950

Indication or determination of total fiber content in Sansevieria by decortication and adding weights of fiber and cleaned tow.

Material was samples run for Joyner on 21 Feb. 1950. His samples were numbered from 1 to 30 as follows:

Samples No. 1 - 5 = 20" leaves, S. Trifasciata
6 - 10 = 30" leaves, S. Trifasciata
11 - 15 = 40" leaves, S. Trifasciata
16 - 20 = 20" leaves, S. Guineensis
21 - 25 = 30" leaves, S. Guineensis
26 - 30 = 36" leaves, S. Guineensis

Each sample composed of 5 leaves.

The tow was combined for each group of 5 samples as grouped above.

Green weight, fiber weight, tow, etc. are as follows:

Sample No.	Green Weight	Fiber	Tow	Fiber & Tow	% Fiber	% Tow	% Tow & Fiber
1 - 5	1143 gr.	17 gr.	3 gr.	20 gr.	1.49	0.26	1.75
6 - 10	2226	35	11	46	1.57	0.49	2.06
11 - 15	* 3110	55	31	86	1.77	1.00	2.77
16 - 20	1370	28	14	42	2.04	1.02	3.06
21 - 25	2622	53	23	76	2.02	.88	2.90
26 - 30	3662	73	40	113	1.99	1.09	3.08

* Group of 5 samples Composed of 26 leaves instead of 25.

Loss of Fiber when 1, 2, 3 and 4 inches of sansevieria leaf is cut off. Leaves pulled when harvested. Each sample consists of 5 leaves.

Sample No.	Original leaf length	Variety	Original wt. grams	Length cut off	Wt. after cutting	Loss in wt. grams	% loss
1	20"	S. Trif.	3.680	Check	------	--------	----
2	20"	S. trif.	3.170	1" off	2.995	0.175	5.53
3	20"	S. trif.	3.400	2" off	3.070	0.330	9.70
4	20"	S. trif.	3.050	3" off	2.520	0.530	17.30
5	20"	S. trif.	3.190	4" off	2.490	0.700	21.90
6	30"	S. trif.	7.015	Check	-----	-----	-----
7	30"	S. trif.	8.310	1" off	8.020	0.290	3.49
8	30"	S. trif.	7.640	2" off	7.075	0.565	7.40
9	30"	S. trif.	5.930	3" off	5.235	0.695	11.72
10	30"	S. trif.	6.175	4" off	5.145	1.030	16.67
11	40"	S. trif.	9.670	Check	-----	----	-----
12	40"	S. trif.	10.490	1" off	10.250	0.240	2.28
13	40"	S. trif.	10.790	2" off	10.285	0.505	4.68
14	40"	S. trif.	12.810	3" off	11.880	0.930	7.25
15	40"	S. trif.	10.985	4" off	9.670	1.315	11.98
16	20"	S. guin.	5.390	Check	------	-----	-----
17	20"	S. guin.	4.960	1" off	4.815	0.145	2.92
18	20"	S. guin.	6.650	2" off	6.075	0.575	8.65
19	20"	S. guin.	5.890	3" off	5.145	0.745	12.65
20	20"	S. guin.	5.290	4" off	4.175	1.115	21.10
21	30"	S. guin.	10.320	Check	-----	-----	-----
22	30"	S. guin.	11.330	1" off	11.045	0.285	2.52
23	30"	S. guin.	10.460	2" off	9.890	0.570	5.45
24	30"	S. guin.	10.440	3" off	9.455	0.985	9.44
25	30"	S. guin.	9.870	4" off	8.330	1.540	15.60
26	36"	S. guin.	14.930	Check	-----	-----	-----
27	36"	S. guin.	13.550	1" off	13.210	0.340	2.51
28	36"	S. guin.	15.420	2" off	14.675	0.745	4.83
29	36"	S. guin.	14.390	3" off	13.105	1.285	8.95
30	36"	S. guin.	14.165	4" off	12.290	1.875	13.25

Note: Since the first inch is below the surface of the ground, a three inch stubble above ground level would be equivalent to four inches of actual leaf cut off.

Sansewieria guineensis

Decorticated on Large machine after rebuilding

First truck load..............	3299 lbs. green wt.	1.50% turnout of fiber
Second " "	3100 lbs. green wt.	1.77% turnout of fiber
Third " "................	2550 lbs. green wt.	1.73% turnout of fiber
Total..........................	8949	Avg. 1.67%

Area harvested, 1/23 of an acre
8949 x 23 = 205,827 lbs. green leaves per acre.
205,827 x 1.67% = 3437.31 lbs. fiber per acre.

Location: Variety plots, Winchester Farm, Boynton, Fla.
Soil Type: Leon Fine Sand
Date of Harvest: Jan & Feb. 1950
Age of Leaves: Three years-many leaves frost damaged.

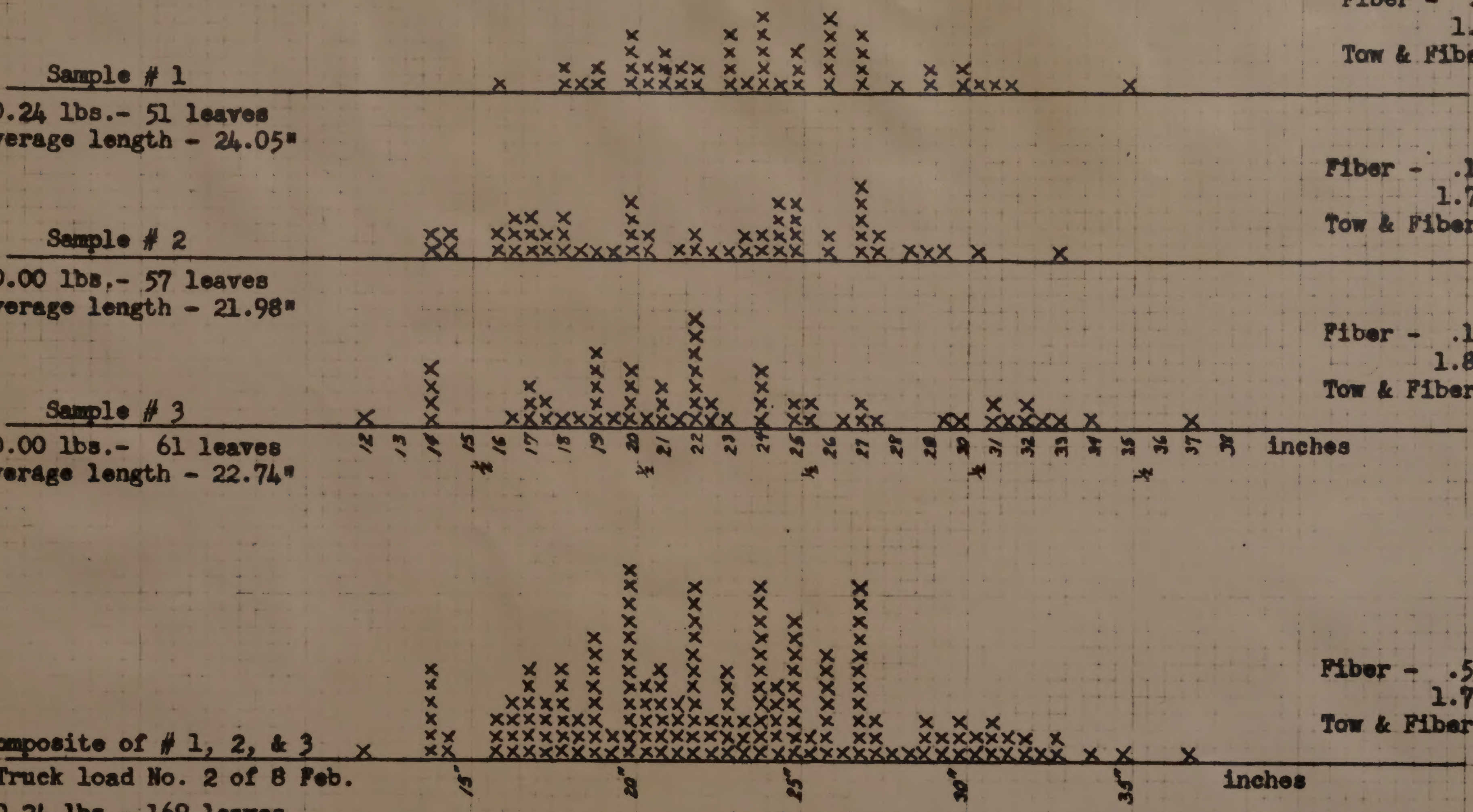
INITIAL TESTS ON DECORDICATOR AFTER REBUILDING

Sansevieria (guineensis) from plots on Winchester Farm.

Test		Date	Decortication Data	Weight Green Leaves Lbs.	Dry Fiber Lbs.	% Turnout	No. Leaves In Sample	Average Length of Leaves	Weight of Dry Tow	Sum of Tow and Fiber	% Tow of Total Fiber Material
1st Preliminary Run		25 Jan		100	1.32						
2d " "		" "		117	1.14						
1st Truck Load, Part-1		2 Feb.	tipps first 400-325rpm	1750	18.39	1.05		24.8"			
	2	" "	tipps first	250	2.84	1.14					
	3	" "	butts first 325-400rpm	250	3.77	1.51					
	4	" "	butts first	250	4.57	1.83					
	5	" "	butts first	250	4.20	1.68					
	6	" "	butts first	332	5.94	1.79					
Control Sample (from 2d Truck)	# 1	9 Feb	Jap Machine @850 rpm	10.24	.185	1.81%	51	24.05"	.077	.262	2.58%
	# 2	" "	" " " "	10.00	.174	1.74%	57	21.98	.077	.251	2.51%
	# 3	" "	" " " "	10.00	.180	1.80%	61	22.74	.079	.259	2.59%
Composite of #1, 2 & 3				30.24	.539	1.78%	169	22.87"	.233	.772	2.55%
2d Truck Load		8 Feb	butts first	3100	54.71	1.77					
Control Sample (from 3d Truck	# 4	14 Feb	Jap Machine @850 rpm	10.20	.187	1.83%	45	27.14	.115	.302	2.98
	# 5	" "	" " "	10.40	.185	1.78%	46	25.95	.101	.286	2.74
	# 6	" "	" " "	10.01	.167	1.65%	46	27.37	.077	.244	2.44
Composite of # 4, 5 & 6				30.61	.539	1.76	137	26.82	.293	.832	2.72
3d Truck Load		13 Feb	butts first	2550	44.07	1.73					

Sansevieria guineensis from Winchester Farm, Boynton, Fla.
Distribution of Leaves According to Length in Control Samples vs Truck Load

21 Feb, 1950



Sample # 1
10.24 lbs.- 51 leaves
Average length - 24.05"

Fiber - .185 lbs.
1.81 %
Tow & Fiber - .262 lbs
2.58 %

Sample # 2
10.00 lbs.- 57 leaves
Average length - 21.98"

Fiber - .174 lbs.
1.74 %
Tow & Fiber - .251 lbs.
2.51 %

Sample # 3
10.00 lbs.- 61 leaves
Average length - 22.74"

Fiber - .180 lbs.
1.80%
Tow & Fiber - .259 lbs.
2.59 %

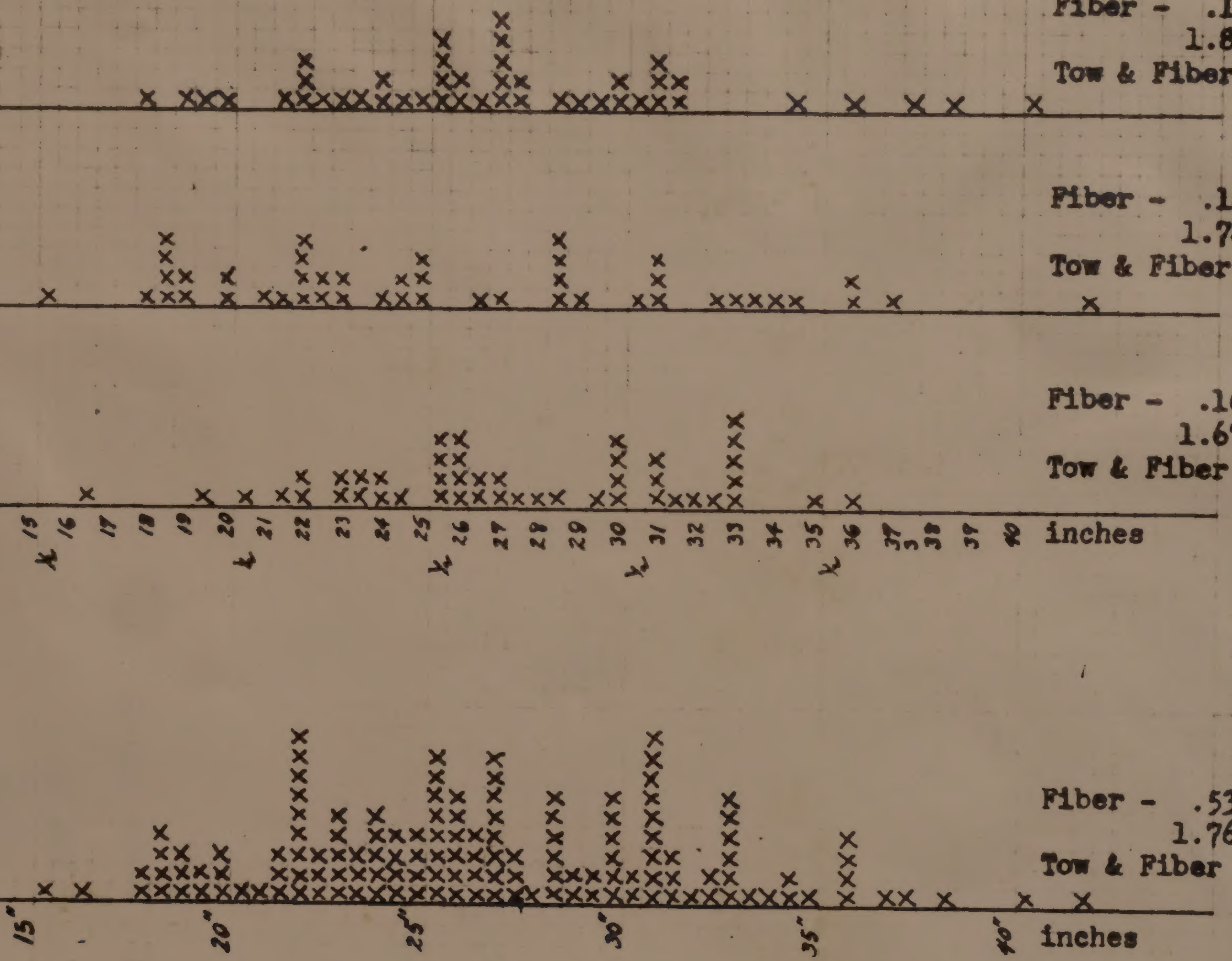
Composite of # 1, 2, & 3
or Truck load No. 2 of 8 Feb.
30.24 lbs.- 169 leaves
Average length - 22.87"

Fiber - .539 lbs.
1.78 %
Tow & Fiber - .772 lbs.
2.55 %

2d Truck Load - 3100. lbs. green leaves
54.71 lbs. fiber
1.77 % yield fiber

Sansevieria guineensis from Winchester Farm, Boynton, Fla.
Distribution of Leaves According to Length in Control Samples vs Truck Load

21 Feb., 1950



Sample # 4
10.20 lbs.- 45 leaves
Average length - 27.14"

Fiber - .187 lbs.
1.83 %
Tow & Fiber - .302 lbs.
2.98 %

Sample # 5
10.40 lbs.- 46 leaves
Average length - 25.95"

Fiber - .185 lbs.
1.78 %
Tow & Fiber - .286 lbs.
2.74 %

Sample #6
10.01 lbs.- 46 leaves
Average length - 27.37

Fiber - .167 lbs.
1.67 %
Tow & Fiber - .244 lbs.
2.44 %

Composite of # 4, 5, & 6
or Truck load No. 3 of 13 Feb.
30.61 lbs.- 137 leaves
Average length - 26.82"

Fiber - .539 lbs.
1.76 %
Tow & Fiber - .832 lbs.
2.72 %

3d Truck Load - 2550. lbs. green leaves
44.07 lbs. fiber
1.73 % yield fiber

1949

Cost of keeping ½ acre of Sansevieria trifasciata completely free of weeds for one year. All Weeding done by hand.

Date	Amount
January	$19.25
February	19.80
March	9.90
April	19.80
May	51.70
June	44.70
July	18.43
August	29.70
September	69.30
October	49.95
November	62.40
December	2.20
	397.13

Average cost per month: $33.09

Sansiveria from Mills H. Byrom, Belle Glade, Florida, August 6, 1948

Serial No.	Section	Variety	Description	Wear SS	Wear SZ	Flex	Scott 3" (1000 lbs. per sq. in.)	Scott ½" (1000 lbs. per sq. in.)	Shear (1000 lbs. per sq. in.)
#1	Base	Guineensis	Regular narrow leaf section	1430	29,324	4581	41.8	47.5	12.8
	Middle								
	Tip			2802	120,205	9624	42.9	46.3	11.3
#2	Base	Guineensis	Broad leaf section	1821	52,502	6793	42.9	45.8	12.3
	Middle								
	Tip			2744	18,592	8141	42.7	46.2	12.0
#3	Base	Guineensis		2675	4779	449	52.5	55.2	10.8
	Middle								
	Tip			1387	4987	8661	44.7	46.1	14.0
#4	Base	Trifasciata		1824	48,593	2103	47.6	49.8	10.8
	Middle			908	30,552	2656	45.8	41.1	10.2
	Tip						48.5	52.2	10.0
#5	Base	Zeylanica		1406	10,600	3112	48.1	44.4	10.4
	Middle								
	Tip			904	27,470	8191	48.7	50.8	11.3
#6	Base	Laurentii	(old)	1453	8912	3672	46.4	50.5	10.4
	Middle								
	Tip						53.0	48.6	
#7	Base	Laurentii	(young)	1354	20,265	3441	48.5	52.4	12.4
	Middle								
	Tip					4416	48.6	43.9	13.2

Sansiveria (Cont'd)

Serial * No.	Section	Variety	Description	Wear SS	Wear SZ	Flex	Scott 3" (1000 lbs. per sq. in.)	Scott ½" (1000 lbs. per sq. in.)	Shear (1000 lbs. per sq. in.)
#8	Base	Longiflora		3572	74,565	7847	44.3	45.5	13.9
	Middle								
	Tip			2546	86,912	9776	50.5	48.9	13.9
#9	Base	Laurentii	Muck grown				53.0	49.7	10.5
	Middle								
	Tip							46.6	
#10	Base	Cylindrica						52.4	12.0
	Middle								
	Tip								

Wear - 6 observations - average no. of cycles to breaking point at 5 lbs. tension.
Flex - 12 observations - average no. of cycles to breaking point at 1 lb. tension.
Scott and Shear - 20 observations.

These tests were performed in the laboratory of the Division of Cotton and Other Fiber Crops and Diseases, Beltsville, Maryland.

* Laboratory serial nos. 1782F to 1791F.

Fertilizer Rates Study (Sansevieria guineensis)

From Ft. Myers, Florida Recieved June 9, 1949

Serial No.	Treatment	Wear SS	Wear SZ	Flex	Scott 3"	Scott ½"	Shear	Fineness
					(1000 lbs./sq. in.)			
Block 2								
2251F #1	Peas	1876	5,378	16,361	57.3	56.6	10.8	127
2252F 2	Uranon	519	2,932	6,553	60.0	58.1	12.6	122
2253F 3	Check	2472	27,861	10,897	53.6	58.2	10.9	129
2254F 4	2,000 lbs. 4-7-5	5119	68,850	9,188	53.8	57.4	12.7	128
2255F 5	1,000 lbs. 4-7-5	1266	11,359	6,717	55.5	54.6	12.5	132
2256F 6	3,000 lbs. 4-7-5	884	5,580	7,478	59.3	55.4	15.1	127
Block 3								
2257F #7	Uramon	1927	34,357	8,415	60.4	61.0	12.7	128
2258F 8	1,000 lbs. 4-7-5	5140	4,962	9,548	57.2	62.6	15.8	135
2259F 9	Check	1647	6,807	7,502	56.8	56.0	14.1	132
2260F 10	Peas	6272	27,970	15,178	52.3	59.9	11.4	126
2261F 11	2,000 lbs. 4-7-5	2739	5,855	10,763	53.6	56.2	11.9	133
2262F 12	3,000 lbs. 4-7-5	645	2,085	4,260	49.6	53.8	10.4	112
Block 1								
2263F #13	3,000 lbs. 4-7-5	1460	23,508	8,590	48.4	55.4	12.2	139
2264F 14A	Uramon 40.5" long	506	5,808	8,248	49.8	57.9	11.5	127
2265F 14B	Uramon 34" long	2488	8,833	7,402	56.9	46.1	11.9	131
2266F 15A	Peas, 40" long	1628	11,253	10,683	55.5	54.2	11.9	137
2267F 15B	Peas, 34" long	412	702	6,899	56.2	53.2	14.3	137
2268F 15C	Peas, 32" long	878	4,179	7,590	56.1	53.6	13.8	134
2269F 16	2,000 lbs. 4-7-5	1382	16,834	7,670	56.9	59.6	12.8	141
2270F 17	1,000 lbs. 4-7-5	2527	106,444	8,534	54.5	48.4	12.2	149
2271F 18	Check	1234	7,204	7,253	50.7	46.8	13.6	136
2272F 19	Fiber from flower stalks	651	8,274	1,269	18.2	20.1	10.6	
2273F 20	1,000 lbs. 4-7-5 (leaves approx. 6 mo. old)	320	1,506	9,769	53.7	51.6	16.7	144

Fertilizer Rates Study (Continued)

Palmetto, Fla.

Serial No.	Treatment	Wear SS	Wear SZ	Flex	Scott 3"	Scott ½"	Shear	Fineness
					1000 lbs. per sq. in.			
2274F #1	No peas	2675	27,394	8,562	49.6	51.8	13.8	154
2275F 2	No peas	1682	36,924	9,651	49.4	57.3	12.2	154
2276F 3	Peas	3065	21,736	8,117	50.6	53.1	13.0	144
2277F 4	Peas	1165	10,284	7,209	53.5	57.5	13.5	125
2278F 5	Peas	1480	49,383	6,360	50.2	56.7	10.5	145

Wear - 6 observations - average no. of cycles to breaking point at 5 lbs. tension.
Flex - 12 observations - average no. of cycles to breaking point at 1 lb. tension.
Scott and Shear - 20 observations.
Fineness - average no. of fibers per bundle.

These tests were performed in the laboratory of the Division of Cotton and Other Fiber Crops and Diseases, Beltsville, Maryland.

MANATEE

Fertilizer Rates Study

Sansevieria guineensis received from J. F. Joyner, March 3, 1949

Serial no.	Treatment	Fineness	Fiber strength 3" span, 1000 lbs./sq. in.
Block I			
2050F	Check	150	45.3
2051F	Uramon	134	52.6
2052F	Peas	148	54.7
2053F	1,000, 4-7-5	116	53.7
2054F	2,000, 4-7-5	139	50.4
2055F	3,000, 4-7-5	157	54.5
MEAN		141	51.9
Block II			
2056F	Check	150	44.8
2057F	Uramon	145	44.0
2058F	Peas	147	48.3
2059F	1,000, 4-7-5	161	41.6
2060F	2,000, 4-7-5	144	45.9
2061F	3,000, 4-7-5	155	48.2
MEAN		150	45.5
Block III			
2062F	Check	147	50.3
2063F	Uramon	177	49.0
2064F	Peas	157	49.0
2065F	1,000, 4-7-5	150	49.6
2066F	2,000, 4-7-5	148	50.8
2067F	3,000, 4-7-5	128	45.5
MEAN		151	49.0

Fineness - number of fibers per 325 milligram bundle.

Scott 3" - 20 observations.

These tests were performed in the laboratory of the Division of Cotton and Other Fiber Crops and Diseases, Beltsville, Maryland.

Comparison of Individual Leaves of *Sansevieria trifasciata*

Relation of Weight of Green Leaf to Length of Leaf

50 leaves

Length of Leaf in Inches																
38	39	41	45	46	48	49	50	51	52	53	54	55	56	57	58	59
95.0	129.0	193.0	100.0	215.0	145.0	110.5	210.0	297.5	158.5	151.0	189.0	263.5	143.0	205.0	188.0	325.5
142.0	158.5		149.0	223.0			186.0	260.5	197.0	186.5	146.0	218.0	194.0	166.5	285.0	184.0
							272.5	177.0		174.0	242.5	164.0		194.0		133.5
							214.5	192.5			223.5			185.0		204.5
							226.5	124.5								171.0
								158.5								
								258.0								
								145.5								
								184.0								
118.5	143.8	193.0	124.5	219.0	145.0	110.5	221.9	199.8	177.7	170.5	200.5	215.1	168.5	187.6	236.5	203.7

Location: O.R. Winchester Farm, Boynton, Fla.
Age of Leaves: 3½ years
Date Harvested: 1/26/49
Soil Type: Leon Fine Sand
Decorticated on Jap Machine

Comparison of individual leaves of Sansevieria trifasciata

Relation of % fiber to length of leaf

50 leaves

Length in inches

38	39	41	45	46	48	49	50	51	52	53	54	55	56	57	58	59
1.62	1.85	1.24	2.17	1.94	1.59	1.83	1.36	1.25	1.91	1.38	1.96	1.20	1.75	1.98	2.32	1.89
2.11	1.75		2.16	2.00			1.62	1.79	1.86	1.80	1.87	1.94	2.05	1.85	1.65	2.16
							1.82	1.39		1.63	1.48	1.80		1.65		2.26
							1.23	1.54			1.64			1.46		2.00
							1.86	1.68								2.25
								1.66								
								1.78								
								1.81								
								1.64								
1.87	1.80	1.24	2.17	1.97	1.59	1.83	1.58	1.62	1.89	1.60	1.74	1.65	1.90	1.73	1.99	2.11

Location: Winchester Farm, Boynton, Fla.
Age of Leaves: 3½ years
Date Harvested 1/26/49
Soil Type: Leon Fine Sand
Decorticated on Jap Machine

Comparison of Individual Leaves of *Sansevieria trifasciata*

Relation of Yield of Dry Fiber to Length of Leaf

50 leaves

Length of Leaves in Inches

Grams of Dry Fiber

38	39	41	45	46	48	49	50	51	52	53	54	55	56	57	58	59
1.54	2.38	2.39	3.23	4.16	2.31	2.02	2.64	3.72	3.22	2.40	3.71	3.17	2.50	4.07	4.36	6.14
3.00	2.77		2.16	4.46			4.20	4.67	3.66	2.71	2.73	4.22	3.98	3.07	4.71	3.98
							2.85	2.48		3.04	3.59	2.96		3.20		3.01
							3.02	2.97			3.65			2.69		4.09
							4.97	2.09								3.84
								2.63								
								2.63								
								4.60								
								3.01								
2.27	2.58	2.39	2.70	4.31	2.31	2.02	3.54	3.20	3.44	2.72	3.42	3.45	2.16	3.26	4.54	4.21

Location: O.R. Winchester Farm, Boynton, Fla.
Age of Leaves: 3½ years
Date Harvested: 1/26/49
Soil Type: Leon Fine Sand
Decorticated on Jap Machine

Comparison of Individual Leaves of *Sansevieria trifasciata*

Relation of Strength to Length of Leaf

50 leaves

Length of Leaves in Inches

38	39	41	45	46	48	49	50	51	52	53	54	55	56	57	58	59
Fiber strength 3" span, 1000 lbs./sq. in.																
56.4	53.3	52.6	53.6	54.8	57.8	51.9	51.0	46.6	56.3	42.5	51.5	47.1	47.9	50.7	51.0	49.0
54.3	52.9		54.9	54.8			53.7	59.5	53.4	57.8	56.8	52.6	48.1	50.8	54.0	51.0
							48.5	51.4		51.0	54.7	50.3		53.9		54.5
							52.0	53.0			50.4			52.8		50.4
							51.5	43.6								54.2
								47.8								
								49.2								
								49.1								
								49.3								
55.3	53.1	52.6	54.2	54.8	57.8	51.9	51.3	49.9	54.8	50.4	53.4	50.0	48.0	52.1	52.5	51.8

Location: O.R. Winchester Farm, Boynton, Fla.
Age of Leaves: 3½ years
Date Harvested: 1/26/49
Soil Type: Leon Fine Sand
Decorticated on Jap Machine

Joyner 36

Storage samples: Sansevieria, Kenaf and Sisal
Submitted by Mills H. Byrom, October, 1945.

Fourth run October 1948

Serial No.		Variety	Treatment	Scott 3" 1000 lbs. per sq.in.
65F	Base Tip	Sansevieria	Decorticated without water, not washed. Dried in sun with juice on fiber.	47,041 43,065
66F	Base Tip	Kenaf	Sample exhausted October, 1947.	
67F	Base Tip	Sansevieria	Sample exhausted October, 1947.	
68F	Base Tip	Sansevieria	Sample exhausted October, 1947.	
69F	Base Tip	Kenaf	Planted July 5, 1945. All plant juice dried on fiber. No washing.	35,472 30,000
70F	Base Tip	Kenaf	Planted July 5, 1945. Washed in machine only. Air dried.	28,816 38,409
71F	Base Tip	Sansevieria	Sample exhausted October, 1947.	
72F	Base Tip	Kenaf	Washed in machine, thoroughly washed in bucket, soaked overnight. Dried in sun.	34,157 33,683
73F	Base Tip	Sansevieria #5	Decorticated dry. Air dried.	49,271 47,203
74F	Base Tip	Sansevieria #6	Fiber washed in tub and machine and barrel. Resoak in juice. Air dried.	48,342 53,325
75F	Base Tip	Sansevieria #2	No H_2O in machine. Air dried with all plant juice on the fiber.	50,570 49,090
76F	Base Tip	Sansevieria #3	Washed in machine. Soaked and washed in bucket. Air dried. Resoaked in juice. Air dried. Burnished old leaves.	48,230
77F	Base Tip	Sansevieria #4	Benson's, Boynton, Fla. Part of 120# lot. Decorticated dry.	51,414 45,472

Storage Test (Cont'd)

Serial No.		Variety	Treatment	Scott 3" 1000 lbs. per sq. in.
78F	Base	Sansevieria #1	Benson's, Boynton. Young leaves. Part of 120# lot. Decorticated dry.	50,241
	Tip			47,001
79F	Base	Sansevieria #8	Fiber washed in machine. Air dried.	53,278
	Tip			51,240
80F	Base	Sansevieria #7	Benson's, Boynton. Young leaves. Part of 120# lot. Decorticated wet. Washed in machine.	49,576
	Tip			47,740
81F	Base	Sansevieria #14	Voss Farm. Washed in machine. Selected old leaves.	44,378
	Tip			52,794
82F	Base	Sansevieria #15	Washed in machine. Air dried.	52,308
	Tip			50,964
83F	Base	Sansevieria #9	Washed in machine, then bucket and soaked overnight. Air dried. Old leaves.	54,930
	Tip			56,573
84F	Base	Sansevieria #10	Part of 120# lot. Decorticated wet.	52,100
	Tip			17,692
85F	Base	Sansevieria #11	Selected young leaves, washed in machine.	47,624
	Tip			48,534
86F	Base	Sansevieria #13	Washed in machine, in tub, soaked overnight. Air dried.	52,104
	Tip			51,748
87F	Base	Sansevieria #12	Washed in machine. Air dried.	51,588
	Tip			53,238
88F	Base	Kenaf #18	Planted 7-5-45. Decorticated without H_2O. Air dried with no juice removed.	29,165
	Tip			27,170
89F	Base	Kenaf #19	Fiber decorticated with H_2O. Juice squeezed out.	25,317
	Tip			
90F	Base	Kenaf #21	Planted 7-5-45. Decorticated with H_2O in machine. Air dried.	34,019
	Tip			23,760
1F	Base	Kenaf #24	Washed in machine.	38,106
	Tip			32,272
92F	Base	Kenaf #23	Washed in machine, soaked in barrel overnight.	36,948
	Tip			35,210

Storage Test (Cont'd)

Serial No.		Variety	Treatment	Scott 3" 1000 lbs. per sq. in.
93F	Base	Kenaf #20	Planted 7-5-45. Washed in machine. Washed in bucket, thoroughly soaked in juice. Air dried.	26,588
	Tip			27,824
94F	Base	Kenaf	Washed in machine, thoroughly washed in bucket. Soaked overnight. Air dried.	28,351
	Tip			
95F	Base	Sisal #16	Decorticated dry.	50,650
	Tip			51,405
96F	Base	Sisal #17	Washed in machine.	59,286
	Tip			50,287

Scott - 20 observations.

These tests were performed in the laboratory of the Division of Cotton and Other Fiber Crops and Diseases, Beltsville, Md.

Individual Leaf Study
Furcraea gigantea
Palmetto, Florida
4/12/49

Plant No. 1

	Length	Width	Green wt. grams	Dry wt.	% fiber
Leaf 1	44"	4.00"	414	8.7	2.10
2	38	3.75	228	5.1	2.24
3	39	4.00	322	6.9	2.14
4	42	4.00	420	8.4	2.00
5	46	4.00	432	8.9	2.06
6	46	4.00	428	9.0	2.10
7	45	4.00	378	9.7	2.57
8	40	4.00	290	6.3	2.17
9	44	4.50	422	7.7	1.82
10	41	4.00	372	7.8	2.10
11	47	4.00	414	8.7	2.10
12	44	4.00	382	8.3	2.17
					2.13

Plant No. 2

	Length	Width	Green wt. grams	Dry wt.	% fiber
Leaf 1	40	4.00	380	7.5	1.97
2	42	4.50	398	8.2	2.06
3	46	4.00	436	8.1	1.86
4	42	4.00	348	7.0	2.01
5	48	4.00	450	9.9	2.20
6	42	4.50	403	8.0	1.98
7	45	4.50	408	8.3	2.03
8	43	4.00	424	8.3	1.96
9	45	4.00	448	8.9	1.99
10	46	4.00	408	8.5	2.08
11	50	4.50	644	13.4	2.08
12	47	4.50	466	10.0	2.15
13	47	4.50	522	11.9	2.28
14	51	4.50	588	11.9	2.02
					2.05

Plant No. 3

	Length	Width	Green wt. grams	Dry wt.	% fiber
Leaf 1	45	4.00	278	3.7	1.33
2	45	3.25	266	4.5	1.69
3	42	3.00	264	5.2	1.97
4	42	3.00	278	4.7	1.69
5	44	3.00	294	4.6	1.56
6	45	4.25	384	7.8	2.03
7	45	3.00	304	5.3	1.74
8	43	3.50	350	6.7	1.91
					1.74

Decorticated on hand decorticator, speed 900 rpm, clearance .010
Fiber washed and dried in sun.

Individual Leaf Study
Furcraea gigantea
Palmetto, Florida
4/12/49

Plant No. 4

	Length	Width	Green wt. grams	Dry wt.	% fiber
Leaf 1	44"	4.00"	348	7.5	2.15
2	49	4.00	444	8.5	1.91
3	45	3.50	338	5.8	1.71
4	44	4.00	348	5.8	1.67
5	44	4.00	346	5.6	1.62
6	46	4.00	394	7.5	1.90
7	49	4.00	474	8.2	1.73
8	47	4.00	366	6.2	1.69
9	49	4.50	484	10.6	2.19
10	51	4.50	482	9.5	1.97
11	46	4.00	362	5.8	1.66
12	48	4.00	408	6.5	1.59
13	47	4.00	460	7.8	1.69
					1.80

Plant No. 5

	Length	Width	Green wt. grams	Dry wt.	% fiber
Leaf 1	43	4.00	396	7.0	1.77
2	43	4.00	400	7.6	1.90
3	43	4.00	410	7.5	1.83
4	42	4.00	386	6.9	1.79
5	43	4.50	384	6.5	1.69
6	46	4.50	436	9.0	2.06
7	44	4.50	478	8.9	1.86
8	53	4.50	658	11.7	1.78
9	44	4.00	350	7.0	2.00
10	44	4.00	394	6.6	1.67
11	44	4.00	426	7.0	1.64
12	48	4.00	424	8.3	1.96
13	51	5.00	604	10.5	1.74
14	47	4.00	482	8.1	1.68
15	51	4.50	598	12.1	2.02
					1.83

9.55 – 1.91

Decorticated on hand decorticator, Speed 900 rpm, clearance .010
Fiber washed and dried in sun.

Serial No.	Leaf	Wear SS	Wear SZ	Flex	Scott 3"	Shear
					(1000 lbs./	sq. in.)
			Part Two			
Plant I						
2189F	1	833	1,069	5843	35.7	14.8
2190F	2	11,374	118,944	5607	38.7	20.3
2191F	3	1,456	275,773	1743	37.8	14.0
2192F	4	5,744	62,820	2060	28.4	13.6
2193F	5	1,547	74,946	2892	42.5	13.2
2194F	6	1,548	5,505	2933	26.8	13.6
2195F	7	1,860	62,840	2269	33.9	13.2
2196F	8	13,625	207,040	3997	38.8	15.2
2197F	9	1,399	22,902	2034	29.4	11.3
2198F	10	5,727	82,197	3289	26.8	15.0
2199F	11	927	18,557	6104	40.5	14.8
2200F	12	912	22,160	1761	26.2	12.7
Plant II						
2201F	1	1,037	388	859	28.8	12.9
2202F	2	3,263	1,453	5588	30.8	16.0
2203F	3	2,568	12,864	3057	29.2	15.2
2204F	4	4,252	1,383	1676	26.4	15.0
2205F	5	4,652	61,442	3421	31.1	16.8
2206F	6	5,637	13,117	3549	27.2	12.0
2207F	7	2,777	26,774	4302	29.4	14.4
2208F	8	6,974	60,223	6322	41.9	13.9
2209F	9	1,838	46,222	1771	43.6	12.4
2210F	10	642	584	1602	31.5	14.7
2211F	11	1,517	14,943	1500	27.8	14.8
2212F	12	740	10,667	1499	22.6	14.0
2213F	13	634	73,788	7673	21.1	14.6
2214F	14	1,081	24,749	12,361	23.9	14.2
Plant III						
2215F	1	2,436	*	*	28.4	13.8
2216F	2	845	*	2554	24.3	15.4
2217F	3	902	36,149	2537	42.1	14.0
2218F	4	15,788	5,835	6210	29.8	13.9
2219F	5	22,449	207,457	5570	47.2	14.0
2220F	6	9,178	82,995	3162	33.7	13.7
2221F	7	1,303	2,390	6377	35.4	14.3
2222F	8	256,196	20,074	5712	40.0	16.0
Plant IV						
2223F	1	6,130	27,020	7129	31.6	14.2
2224F	2	2,204	10,954	2688	38.7	16.7
2225F	3	2,398	9,296	4605	43.8	15.7
2226F	4	8,114	60,486	3705	37.8	17.7

Furcraea gigantea (Continued)

Serial No.	Leaf	Wear SS	Wear SZ	Flex	Scott 3"	Shear
					(1000 lbs./ sq. in.)	
Plant IV	(Cont'd)					
2227F	5	10,767	88,960	3215	30.0	14.6
2228F	6	35,394	110,610	3889	23.3	12.5
2229F	7	11,751	192,051	8348	31.4	12.4
2230F	8	35,578	148,925	1964	32.8	14.3
2231F	9	888	4,299	4337	45.0	14.6
2232F	10	1,178	21,719	3671	44.1	13.8
2233F	11	3,992	112,577	5646	39.8	12.5
2234F	12	4,793	243,362	2419	43.8	13.2
2235F	13	7,520	97,650	8541	32.2	12.4
Plant V						
2236F	1	1,116	2,699	3175	33.6	13.4
2237F	2	1,473	1,046	4637	25.2	14.8
2238F	3	1,004	4,288	1925	30.5	15.9
2239F	4	*	*	4764	44.2	14.9
2240F	5	2,499	*	6967	27.6	17.5
2241F	6	1,522	48,777	2403	39.6	14.6
2242F	7	5,450	50,984	5903	40.1	13.3
2243F	8	15,939	77,145	3425	37.9	19.9
2244F	9	6,236	45,954	7876	43.2	18.7
2245F	10	1,108	9,441	5359	39.4	12.6
2246F	11	6,752	47,175	2850	41.4	19.7
2247F	12	462	877	2663	31.0	14.4
2248F	13	14,533	74,499	7581	24.6	13.1
2249F	14	5,924	136,636	2262	38.9	15.3
2250F	15	1,748	33,231	1665	38.9	11.0

* not run due to lack of fiber.

Wear - 1 observation - average no. of cycles to breaking point at 5 lbs. tension.
Flex - 1 observation - average no. of cycles to breaking point at 1 lb. tension.
Scott 3" - 4 observations.
Shear - 4 observations.

These tests were performed in the laboratory of the Division of Cotton and Other Fiber Crops and Diseases, Beltsville, Maryland.

Individual Leaf Study
Furcraea gigantea
Ft Myers, Florida
1/20/49

Plant No. 1

	Length	Width	Green wt.grams	Dry wt.	% fiber
Leaf 1	35"	3.5"	269	4.60	1.71
2	37	3.75	283	5.70	2.01
3	37	4.0	295	6.70	2.27
4	37	4.0	293	6.40	2.18
5	38	4.0	323	6.60	2.04
6	40	4.5	345	7.30	2.11
7	40	4.5	367	6.40	1.74
8	37	3.75	297	6.30	2.12
9	41	5.0	415	8.90	2.14
10	37	3.5	290	5.30	1.83
11	39	4.0	309	6.80	2.20
12	40	4.5	313	6.60	2.11
13	40	4.0	337	7.30	2.17
14	39	4.5	277	6.25	2.26
					2.06

Plant No. 2

Leaf 1	35	3.75	289	3.90	1.35
2	37	4.0	309	5.20	1.68
3	40	4.0	355	7.90	2.22
4	38	4.0	347	4.40	1.27
5	40	4.0	333	7.50	2.25
6	42	4.5	373	8.00	2.14
7	44	4.5	465	8.50	1.83
8	46	5.0	557	8.90	1.60
9	38	3.75	335	6.00	1.79
10	41	4.0	393	8.30	2.11
11	46	5.5	573	5.50	0.96
12	41	4.0	383	2.90	0.76
13	38	3.5	265	3.70	1.40
					1.64

Plant No. 3

Leaf 1	39	4.25	357	6.80	1.90
2	40	4.25	375	6.10	1.63
3	40	4.25	361	6.80	1.88
4	40	4.50	383	7.10	1.85
5	40	3.75	303	6.80	2.24
6	39	4.0	362	8.80	2.43
7	41	4.50	395	6.90	1.75
8	40	4.0	383	7.10	1.85
9	41	4.0	383	7.30	1.91
10	41	4.50	437	7.35	1.68
					1.91

Individual Leaf Study-continued
Furcraea gigantea
Ft Myers, Florida
1/20/49

Plant No. 4

	Length	Width	Green wt. grams	Dry wt.	%fiber
Leaf 1	41"	4.0"	401	8.40	2.09
2	41	4.25	413	8.40	2.03
3	38	4.25	357	6.60	1.85
4	41	4.0	419	9.40	2.24
5	41	4.25	415	9.10	2.19
6	42	4.25	417	10.40	2.49
7	43	4.50	469	7.80	1.66
8	41	4.50	441	9.50	2.15
9	41	4.50	417	9.30	2.23
10	41	4.50	409	10.10	2.46
11	43	4.25	403	7.10	1.76
					2.10

Plant No. 5

Leaf 1	39	4.25	403	6.50	1.61
2	40.5	4.50	433	9.00	2.08
3	37	4.00	321	7.00	2.18
4	41	4.25	443	7.10	1.60
5	40.5	4.50	475	9.20	1.94
6	42	5.00	535	9.80	1.83
7	41	4.75	453	10.50	2.32
8	41	4.75	433	9.50	2.19
9	37	4.00	283	7.50	2.65
10	45	4.75	553	9.50	1.72
11	41	4.75	473	10.85	2.29
12	43	4.50	517	12.40	2.40
13	43	4.75	513	9.60	1.87
14	42	4.50	455	10.30	2.26
					2.07

Plant No. 6

Leaf 1	36	3.75	309	5.40	1.75
2	34	3.50	241	5.70	2.36
3	38.5	4.00	347	7.50	2.16
4	40	4.25	375	8.80	2.35
5	38	4.00	341	8.60	2.52
6	36	3.75	333	7.20	2.16
7	37.5	3.75	347	7.50	2.16
8	42	4.25	405	9.50	2.34
9	38	3.75	353	7.35	2.08
10	39	4.00	375	8.70	2.32
11	41	4.50	417	9.90	2.37
12	41	4.00	389	9.55	2.45
13	42	4.25	381	8.80	2.31
					2.26

Individual Leaf Study-continued
Furcraea gigantea
Ft Myers, Florida
1/20/49

Plant No. 7

	Length	Width	Green wt.grams	Dry wt.	% fiber
Leaf 1	30"	3.50"	197	3.70	1.88
2	38	4.00	323	9.30	2.88
3	33	3.25	255	5.10	2.00
4	35	3.50	277	4.00	1.44
5	32	3.25	223	4.70	2.11
6	34	3.50	275	5.60	2.04
7	34	3.25	271	5.40	1.99
8	34	3.25	255	6.40	2.51
9	36	3.75	277	6.40	2.31
10	36	3.25	295	6.90	2.39
11	36	3.75	277	5.90	2.13
12	37	4.25	279	7.00	2.51
13	37	4.25	293	5.10	1.74
14	37	3.75	295	6.60	2.24
					2.16

Plant No. 8

Leaf 1	36	4.00	261	5.40	2.07
2	37	3.75	303	5.20	1.72
3	38	4.25	345	6.60	1.91
4	37	4.00	337	5.30	1.57
5	40	4.50	365	7.10	1.94
6	37	3.75	317	5.40	1.70
7	36	3.50	251	4.70	1.67
8	40	4.50	375	7.50	2.00
9	39	4.25	365	6.50	1.78
10	36	3.50	297	6.20	2.09
11	38	4.25	321	6.50	2.02
					1.88

16.08 – 2.01

Furcraea gigantea from J. Frank Joyner

Part one received March 8, 1949
Part two received June 8, 1949

Serial No.	Leaf	Wear SS	Wear SZ	Flex	Scott 3" (1000 lbs./sq. in.)	Shear
			Part One			
Plant #1						
1950F	1	2,975	*	4159	36.8	*
1951F	2	14,484	61,243	3702	37.0	14.9
1952F	3	12,092	24,891	3825	33.9	12.2
1953F	4	10,178	*	3380	36.6	14.3
1954F	5	21,617	*	3383	35.7	11.3
1955F	6	1,100	*	4715	30.7	12.6
1956F	7	9,204	*	7181	37.0	14.7
1957F	8	7,134	*	6107	37.2	12.6
1958F	9	1,201	120,526	5184	27.6	11.6
1959F	10	6,193	*	2863	36.3	12.7
1960F	11	17,676	*	3246	38.6	14.9
1961F	12	18,572	*	6941	33.8	11.8
1962F	13	1,507	*	7034	29.5	12.8
1963F	14	9,453	*	4295	28.3	14.2
Plant #2						
1964F	1	34,419	*	3346	30.8	13.0
1965F	2	70,078	*	3693	36.4	12.8
1966F	3	1,497	37,522	2994	38.1	12.8
1967F	4	*	*	3757	36.1	18.0
1968F	5	4,013	*	3234	40.1	*
1969F	6	1,051	27,264	4426	41.2	12.0
1970F	7	6,459	*	4095	38.2	15.9
1971F	8	3,979	60,982	2900	35.8	12.4
1972F	9	1,378	*	2895	36.2	23.3
1973F	10	3,791	65,662	4132	42.4	13.8
1974F	11	2,948	*	3919	36.3	12.0
1975F	12	*	*	*	32.4	*
1976F	13	*	*	3838	30.3	15.5
Plant #3						
1977F	1	7,249	*	5405	31.4	13.6
1978F	2	5,403	60,590	2721	36.6	14.0
1979F	3	16,494	*	9167	33.6	12.2
1980F	4	3,831	*	3102	36.6	13.8
1981F	5	3,943	*	6835	28.6	12.1
1982F	6	4,092	34,961	4852	30.6	12.7
1983F	7	42,460	*	3040	30.2	14.3

Furcraea gigantea (Continued)

Serial No.	Leaf	Wear SS	Wear SZ	Flex	Scott 3" (1000 lbs./	Shear sq. in.)
Plant #3 (Cont'd)						
1984F	8	54,295	*	4293	33.8	10.5
1985F	9	2,284	*	4478	36.0	13.8
1986F	10	1,203	*	3612	34.3	14.1
Plant #4						
1987F	1	12,380	42,923	2966	34.6	11.7
1988F	2	42,942	204,904	4616	34.1	13.1
1989F	3	146,533	105,102	3845	34.9	11.6
1990F	4	1,815	13,209	2915	36.9	14.8
1991F	5	137,584	63,163	5544	35.0	13.4
1992F	6	19,762	34,515	3404	38.2	14.6
1993F	7	3,732	27,044	2984	33.2	12.9
1994F	8	1,271	14,180	4226	41.6	14.6
1995F	9	89,160	92,931	2064	32.9	12.5
1996F	10	5,689	77,797	4019	35.2	14.3
1997F	11	29,182	24,390	5968	42.2	14.9
Plant #5						
1998F	1	1,271	52,267	4308	44.2	14.0
1999F	2	1,740	48,549	2465	37.3	13.6
2000F	3	1,039	85,155	3309	34.2	11.1
2001F	4	5,951	*	3475	45.5	15.6
2002F	5	2,773	121,492	2477	41.2	18.2
2003F	6	7,431	81,605	2626	47.2	17.4
2004F	7	9,759	37,101	4000	47.4	10.8
2005F	8	50,930	64,455	2142	38.9	13.1
2006F	9	4,148	31,975	2980	37.2	13.8
2007F	10	3,318	72,275	3433	37.7	12.5
2008F	11	28,946	93,503	3043	45.2	14.7
2009F	12	2,920	126,147	3416	33.4	12.6
2010F	13	2,536	122,216	7139	32.8	13.2
2011F	14	1,614	15,080	2057	46.7	15.7
Plant #6						
2012F	1	15,119	*	6080	39.1	9.4
2013F	2	1,562	*	6799	33.4	12.4
2014F	3	1,008	19,166	5296	37.7	13.8
2015F	4	3,488	56,805	3157	40.8	18.6
2016F	5	5,149	135,455	2651	41.0	15.5
2017F	6	18,526	*	4783	29.1	15.5
2018F	7	3,671	174,210	5882	41.1	12.6
2019F	8	2,356	139,120	5622	38.8	14.8
2020F	9	8,415	161,081	4442	44.4	12.1
2021F	10	8,805	39,523	3180	41.6	20.4
2022F	11	8,028	69,561	3090	39.3	14.5
2023F	12	4,779	69,229	3593	39.0	12.4

Serial No.	Leaf	Wear SS	Wear SZ	Flex	Scott 3" (1000 lbs./ sq. in.)	Shear
Plant #6 (Cont'd)						
2024F	13	19,642	*	6107	31.2	13.2
Plant #7						
2025F	1	*	*	7864	33.6	14.1
2026F	2	1,781	17,839	3421	31.5	13.8
2027F	3	2,609	*	6837	34.9	14.6
2028F	4	54,641	*	3370	35.1	13.8
2029F	5	*	*	3534	35.8	14.4
2030F	6	3,825	*	2585	32.0	13.2
2031F	7	36,972	*	*	37.9	13.4
2032F	8	3,525	*	5488	35.5	15.0
2033F	9	9,921	*	5517	39.1	13.4
2034F	10	1,989	2,409	2678	39.4	14.3
2035F	11	1,875	*	3176	35.4	14.2
2036F	12	122,196	*	4211	37.6	12.5
2037F	13	41,154	*	5047	33.6	12.8
2038F	14	2,330	*	4244	34.8	15.8
Plant #8						
2039F	1	1,987	*	8158	32.1	15.1
2040F	2	17,975	*	7005	39.4	12.4
2041F	3	39,775	*	4463	32.7	14.3
2042F	4	2,280	*	4477	35.6	14.1
2043F	5	15,687	*	5557	36.2	15.8
2044F	6	2,792	*	7381	33.2	11.1
2045F	7	*	*	4892	33.6	14.6
2046F	8	3,852	*	5114	28.9	12.4
2047F	9	4,645	*	4482	33.8	16.5
2048F	10	3,730	*	6186	37.1	14.6
2049F	11	22,805	56,642	4590	43.2	14.6

* not run due to lack of fiber

(1) Yi
Treatme
No

1 F
2 F
3 F
4 F
5 F
6 F
7 F
8 F
9 F

(2) %
Treat
No

1
2
3
4
5
6
7
8
9

(3) Y
Treat
No

1
2
3
4
5
6
7
8
9

Phosphate - Potash Fertilizer Experiment on Ramie at Newport Industries, Inc. -- 1949.

(1) Yield of green Material, pounds per acre.

Treatments No	 Type	1 Harvest	2 Harvest	3 Harvest	Total
1	P_0K_0	16,916	20,496	8,639	46,051
2	P_0K_1	17,467	19,463	8,570	45,500
3	P_0K_2	18,121	20,427	11,358	49,906
4	P_1K_0	17,794	21,373	9,585	48,752
5	P_1K_1	18,620	21,614	9,981	50,215
6	P_1K_2	18,603	20,547	9,981	49,131
7	P_2K_0	18,431	21,201	11,306	50,938
8	P_2K_1	19,515	22,544	10,325	52,384
9	P_2K_2	20,220	21,064	11,203	52,487

(2) % Fiber on green weight basis.

Treatments No	 Type	1 Harvest	2 Harvest	3 Harvest	Average
1	P_0K_0	2.73	3.23	1.54	2.50
2	P_0K_1	2.79	3.34	1.62	2.58
3	P_0K_2	2.74	3.29	2.20	2.74
4	P_1K_0	2.66	3.33	1.80	2.60
5	P_1K_1	2.81	3,42	1.79	2.67
6	P_1K_2	2.68	3.31	1.78	2.59
7	P_2K_0	2.61	3.43	2.23	2.76
8	P_2K_1	2.74	3.34	1.89	2.66
9	P_2K_2	2.86	3.37	1.71	2.65

(3) Yield of Mechanically decorticated fiber, pounds per acre.

Treatment No	 Type	1 Harvest	2 Harvest	3 Harvest	Total
1	P_0K_0	459	664	133	1256
2	P_0K_1	499	650	139	1288
3	P_0K_2	499	673	250	1422
4	P_1K_0	473	712	172	1357
5	P_1K_1	523	740	176	1439
6	P_1K_2	533	680	177	1390
7	P_2K_0	482	728	251	1461
8	P_2K_1	537	754	194	1485
9	P_2K_2	580	711	193	1484

PK Fertilizer Experiment on Ramie at Newport Industries Inc. 1949. (Continued)

(1) Yield of green material, pounds per acre.

Treatment	1 Harvest	2 Harvest	3 Harvest	Total
P_0	17,501	20,129	9,522	47,152
P_1	18,339	21,178	9,849	49,366
P_2	19,389	21,603	10,945	51,937
K_0	17,714	21,024	9,843	48,581
K_1	18,534	21,207	9,626	49,367
K_2	18,981	20,679	10,847	50,507

(2) % Fiber on green weight basis.

Treatment	1 Harvest	2 Harvest	3 Harvest	Average
P_0	2.75	3.29	1.79	2.61
P_1	2.72	3.36	1.79	2.62
P_2	2.74	3.38	1.94	2.69
K_0	2.67	3.33	1.85	2.62
K_1	2.78	3.37	1.77	2.64
K_2	2.76	3.33	1.90	2.66

(3) Yield of mechanically decorticated fiber, pounds per acre.

Treatment	1 Harvest	2 Harvest	3 Harvest	Total
P_0	486	663	174	1323
P_1	510	711	175	1396
P_2	533	731	213	1477
K_0	472	702	185	1359
K_1	520	715	170	1405
K_2	537	688	207	1432

rtilizer Treatments:

$_0$ - Nil pounds P_2O_5 per acre
P_1 - 30 " " " "
P_2 - 60 " " " "

K_0 - Nil pounds K_2O per acre
K_1 - 90 " " " "
K_2 - 180 " " " "

In addition all plots in the experiment received a basic application of trace elements as follows:

Copper sulphate	25 pounds per acre
Manganese sulphate	25 " " "
Zinc sulphate	10 " " "
Borax	5 " " "

51.

NITROGEN FERTILIZER EXPERIMENT ON RAMIE AT NEWPORT INDUSTRIES, INC. 1949

(1) Yield of Green Material

Treatments			Nitrogen	Pounds per acre			
No.	Type of Fertilizer	Time of application	Lbs. per acre	1 Harvest	2 Harvest	4 Harvest	Total
1	Control		Nil	18,491	21,715	12,480	52,686
2	Uraform G-6	Before 1 harvest	50	19,754	21,453	12,502	53,709
3	Uraform G-7	Before 1 harvest	50	18,578	22,499	12,850	53,927
4	Uraform 481	Before 1 harvest	50	19,515	20,931	12,894	53,340
5	Uraform 482	Before 1 harvest	50	19,471	21,780	13,090	54,341
6	Millorganite	Before 1 harvest	50	18,557	21,388	13,329	53,274
7	Castor Pomace	Before 1 harvest	50	18,535	22,390	12,894	53,819
8	Uramon	Before 2 harvest	50	17,642	22,804	12,589	53,035
9	Sodium Nitrate	Before 2 harvest	50	17,838	21,366	13,024	52,228
10	Ammonium Sulphate	Before 2 harvest	50	19,079	21,780	12,698	53,557
11	Uramon	1/2 before 2 harvest 1/2 before 3 harvest	25 25	17,947	22,237	12,654	52,838
12	Sodium Nitrate	1/2 before 2 harvest 1/2 before 3 harvest	25 25	17,163	21,039	12,959	51,161

(2) % Fiber on Green Weight Basis:

Treatments			Nitrogen	1	2	4	
No.	Type of Fertilizer	Time of Application	Lbs. per acre	Harvest	Harvest	Harvest	Average
1	Control		Nil	3.07	2.69	2.93	2.89
2	Uraform G-6	Before 1 harvest	50	2.88	2.52	2.84	2.75
3	Uraform G-7	Before 1 harvest	50	2.81	2.42	2.77	2.67
4	Uraform 481	Before 1 harvest	50	2.83	2.56	287	2.75
5	Uraform 482	Before 1 harvest	50	3.03	2.50	2.75	2.76
6	Millorganite	Before 1 harvest	50	2.92	2.70	2.75	2.79
7	Castor Pomace	Before 1 harvest	50	2.84	2.49	2.80	2.71
8	Uramon	Before 2 harvest	50	2.87	2.57	2.87	2.77
9	Sodium Nitrate	Before 2 harvest	50	2.84	2.46	2.74	2.68
10	Ammonium Sulphate	Before 2 harvest	50	2.73	2.51	2.87	270
11	Uramon	1/2 before 2 harvest 1/2 before 3 harvest	25 25	2.80	2.28	2.76	2.62
12	Sodium Nitrate	1/2 before 2 harvest 1/2 before 3 harvest	25 25	2.69	2.43	2.74	2.62

57

NITROGEN FERTILIZER Experiment ON RAMIE AT NEWPORT INDUSTRIES, INC. 1949, Cont'd.

(3) Yield of Mechanically Decorticated Fiber

Treatments				Pounds per acre			
No.	Type of fertilizer	Time of application	Nitrogen Lbs. per acre	1 Harvest	2 Harvest	4 Harvest	Total
1	Control		Nil	566	588	366	1520
2	Uraform G-6	Before 1 harvest	50	568	542	355	1465
3	Uraform G-7	Before 1 harvest	50	521	545	355	1421
4	Uraform 481	Before 1 harvest	50	549	538	368	1455
5	Uraform 482	Before 1 harvest	50	590	547	362	1499
6	Millorganite	Before 1 harvest	50	542	575	366	1483
7	Castor Pomace	Before 1 harvest	50	525	560	362	1447
8	Uramon	Before 2 harvest	50	507	586	362	1455
9	Sodium Nitrate	Before 2 harvest	50	507	525	357	1389
10	Ammonium Sulphate	Before 2 harvest	50	523	547	366	1436
11	Uramon	1/2 before 2 harvest 1/2 before 3 harvest	25 25	503	505	348	1356
12	Sodium Nitrate	1/2 before 2 harvest 1/2 before 3 harvest	25 25	462	512	357	1331

Additional Fertilizer Applications:

In addition, all plots in the experiment received a basic application of the following types of fertilizers:

Phosphate	40 Lbs. P_2O_5 per acre
Potash	180 Lbs. K_2O per acre
Trace Elements	
Copper Sulphate	25 Lbs. per acre
Manganese Sulphate	25 Lbs. per acre
Zinc Sulphate	10 Lbs. per acre
Borax	5 Lbs. per acre

Time of Application of Fertilizer Experiment on Ramie at Newport Industries Inc. -- 1949.

(1) Yield of green material, pounds per acre.

Treatment No.	Applications			1 Harvest	2 Harvest	4 Harvest	Total
	Before 1 Harvest	Before 2 Harvest	Before 3 Harvest				
1	Nil	Nil	Nil	16,194	18,396	9,104	43,694
2	Whole	----	----	18,895	21,408	10,859	51,162
3	----	Whole	----	16,176	20,410	10,738	47,324
4	Half	Half	----	18,104	20,582	10,738	49,424
	Half	----	Half	18,069	19,412	10,480	47,961
	Third	Third	Third	16,779	19,790	10,583	47,152

(2) % Fiber on green weight basisl

Treatment No.	Applications			1 Harvest	2 Harvest	4 Harvest	Average
	Before 1 Harvest	Before 2 Harvest	Before 3 Harvest				
1	Nil	Nil	Nil	2.84	3.26	1.89	2.66
2	Whole	----	----	2.95	3.37	2.03	2.78
3	----	Whole	----	2.93	3.11	1.89	2.64
4	Half	Half	----	3.10	3.24	1.96	2.76
5	Half	----	Half	2.80	3.33	1.63	2.59
6	Third	Third	Third	2.89	3.16	1.91	2.66

(3) Yield of mechanically decorticated fiber, pounds per acre.

Treatment No.	Applications			1 Harvest	2 Harvest	4 Harvest	Total
	Before 1 Harvest	Before 2 Harvest	Before 3 Harvest				
1	Nil	Nil	Nil	461	601	170	1232
2	Whole	----	----	556	721	220	1497
3	----	Whole	----	473	635	203	1311
4	Half	Half	----	561	666	208	1435
5	Half	----	Half	506	647	170	1323
6	Third	Third	Third	485	625	203	1313

Composition of Fertilizer Mixture

The fertilizer mixture used in this experiment was composed of the following elements:

Phosphate	40	pounds P_2O_5	per acre.
Potash	180	" K_2O	" "

Trace Elements

Copper sulphate	25	pounds	per	acre
Manganese sulphate	25	pounds	per	acre
Zinc sulphate	10	"	"	"
Borax	5	"	"	"

RAMIE VARIETY TESTS IN THE FIBER NURSERY OF THE EVERGLADES EXPERIMENT STATION 1949

(1)	Yield of Green Material			Pounds per acre			
Plot No.	Variety			1 Harvest	2 Harvest	3 Harvest	Total
R 2	Boehmeria	Nivea	Clove B	14,980	19,191	14,757	48,928
3	"	"	" C	17,995	25,779	16,282	60,056
5	"	"	" E	36,756	42,813	26,428	105,997
6	"	"	P.I. 70971	18,407	20,122	15,777	54,306
8			#21952	18,609	27,089	14,511	60,209
9	"	"	#15752	21,184	30,455	14,571	66,210
10	"	"	De Francia	26,260	35,964	20,334	82,558
11	"	"	Americana	25,992	33,997	20,067	80,056
12	"	"		28,205	34,461	18,569	81,235
13	"	"	Louisiana Common	30,669	30,566	19,261	80,496
14	"	"		27,994	30,942	17,405	76,341
15	"	"		15,737	27,866	14,835	58,438
16	"	Utilis		38,548	49,390	22,270	110,208
17	"	Nivea	Usitatissima	27,329	29,641	16,700	73,670
20	"	"	P.I. 159363	18,384	24,786	16,681	59,851
21	"	"	P.I. 159364	25,905	26,565	14,045	66,515
22	"	"	P.I. 159365	26,842	26,628	15,848	69,318
23	"	"	P.I. 159366	24,892	27,338	12,718	64,948
24	"	"	Highland, Jamaica	33,310	21,424	15,375	70,109
25	"	"	Lowland, "	31,665	23,416	17,158	72,239
147	"	"	P.I. 162935	33,188	41,817	25,144	100,149
148	"	"	P.I. 162936	35,273	45,371	26,816	107,460
149	"	"	P.I. 162937	27,023	32,504	22,170	81,697
150	"	"	P.I. 162938	24,890	34,044	21,529	80,463
151	"	"	P.I. 162939	24,071	36,345	22,414	82,830
152	"	"	P.I. 162940	30,904	39,309	22,948	93,161
153	"	"	P.I. 162941	27,443	39,539	21,743	88,725
154	"	"	P.I. 162942	18,578	27,634	15,433	61,645
156	"	"	P.I. 162944	22,615	31,930	17,750	72,295
157	"	"	P.I. 162945	28,454	41,587	23,230	93,271
	"	"	Brazil		22,381	19,137	
			P.I. 87521-Commercial	29,168	30,144	19,641	78,953

RAMIE VARIETY TESTS IN THE FIBER NURSERY OF THE EVERGLADES EXPERIMENT STATION 1949 (cont'd)

Plot No.	Variety			1 Harvest	2 Harvest	3 Harvest	Total
R103	Boehmeria	Nivea	Selection from	32,667	38,291	20,508	91,466
104	"	"	P.I. 87521	31,680	32,417	19,708	83,805
105	"	"	"	27,427	28,420	24,789	80,636
106	"	"	"	23,589	25,064	19,689	68,342
109	"	"	"	28,260	34,020	29,051	91,331
110	"	"	"	27,462	23,139	20,833	71,434
111	"	"	"	44,611	59,234	29,449	133,294
112	"	"	"	31,785	41,996	19,409	93,190
113	"	"	"	28,314	31,944	20,864	81,122
114	"	"	"	33,776	34,446	23,016	91,238
115	"	"	"	30,157	31,833	21,635	83,625
116	"	"	"	34,056	33,898	22,524	90,478
117	"	"	"	26,806	31,917	21,282	80,005
120	"	"	"	33,413	49,275	14,948	97,636
121	"	"	"	32,630	44,305	20,275	97,210
122	"	"	"	24,081	34,498	21,356	79,935
123	"	"	"	23,324	46,637	16,539	86,500
124	"	"	"	25,765	36,035	6,987	68,787
125	"	"	"	33,473	39,467	13,489	86,429
127	"	"	"	31,680	50,440	23,430	105,550
132	"	"	"	28,030	39,073	10,004	77,107
133	"	"	"	32,097	46,163	31,736	109,996
134	"	"	"	35,828	44,591	14,520	94,936
135	"	"	"	31,460	45,640	30,700	107,800
138	"	"	"	25,998	32,767	34,742	93,507
139	"	"	"	26,862	37,934	28,496	93,292
140	"	"	"	31,263	36,816	32,250	100,329
141	"	"	"	39,986	48,789	28,805	117,580
143	"	"	"	25,846	34,297	23,419	83,562

RAMIE VARIETY TESTS IN THE FIBER NURSERY OF THE EVERGLADES EXPERIMENT STATION 1949.

(2) % Fiber on a Green Weight Basis

Plot No.	Variety	L Harvest	2 Harvest	3 Harvest	Average
R 2	Boehmeria Nivea Clove B	1.10	1.76	1.03	1.30
3	" " Clove C	1.76	2.33	1.80	1.96
5	" " Clove E	2.03	1.75	1.68	1.82
6	" " P.I. 70971	2.36	2.95	2.55	2.62
8	" " 21952	1.25	1.40	1.28	1.31
9	15752	1.59	1.77	1.94	1.77
10	De Francia	1.65	2.09	1.64	1.79
11	Americana	1.75	2.29	1.52	1.85
12	"	1.94	2.56	2.17	2.22
13	Louisiana Common	1.52	1.88	1.81	1.74
14		1.65	2.34	1.58	1.86
15		2.02	2.27	1.75	2.01
16	Boehmeria Utilis	0.77	1.59	0.99	1.12
17	" Nivea Usatatissima	1.50	2.05	1.56	1.70
20	" " P.I. 159363	2.81	3.35	2.59	2.92
21	" " P.I. 159364	1.74	2.66	1.98	2.13
22	" " P.I. 159365	2.38	4.02	2.02	2.81
23	" " P.I. 159366	3.06	4.46	2.99	3.50
24	" " Highland Jamaica	2.26	3.01	2.30	2.52
25	" " Lowland Jamaica	2.40	4.12	2.53	3.02
147	" " P.I. 162935	2.38	3.15	2.51	2.68
148	" " P.I. 162936	2.33	2.87	2.33	2.51
149	" " P.I. 162937	2.56	3.24	2.24	2.68
150	" " P.I. 162938	2.78	3.24	2.45	2.82
151	" " P.I. 162939	2.51	3.16	2.17	2.61
152	" " P.I. 162940	2.00	2.22	1.59	1.94
153	" " P.I. 162941	2.39	2.83	2.40	2.54
154	" " P.I. 162942	2.71	2.98	2.29	2.66
156	" " P.I. 162944	2.85	3.28	2.71	2.95
157	" " P.I.162945	2.50	2.85	2.53	2.66
	" " Brazil		3.64	3.13	
	" " P.I. 87521 Commercial	2.97	3.48	2.71	3.05

RAMIE TESTS IN THE FIBER NURSERY OF THE EVERGLADES EXPERIMENT STATION 1949 CONT'D.

Plot No.	Variety			1 Harvest	2 Harvest	3 Harvest	Average
R 10 3	Boehmeria	Nivea	Selection from	1.81	2.37	1.93	2.04
104	"	"	P.I. 87521	2.48	3.22	2.39	2.70
105	"	"	"	2.13	2.72	2.14	2.33
106	"	"	"	3.08	3.79	3.12	3.33
109	"	"	"	2.26	2.27	3.04	2.52
110	"	"	"	3.19	3.22	3.02	3.14
111	"	"	"	1.86	2.22	1.75	1.94
112	"	"	"	2.59	2.78	2.37	2.58
113	"	"	"	3.53	3.03	3.20	3.25
114	"	"	"	2.59	3.08	2.50	2.72
115	"	"	"	2.60	2.52	2.57	2.56
116	"	"	"	1.95	2.10	2.47	2.17
117	"	"	"	3.33	2.88	2.19	2.80
120	"	"	"	2.23	2.35	2.47	2.35
121	"	"	"	2.01	2.52	2.74	2.42
122	"	"	"	2.97	3.23	3.19	3.13
123	"	"	"	1.37	2.73	1.91	2.00
124	"	"	"	2.41	3.03	2.93	2.79
125	"	"	"	2.65	3.30	3.09	3.01
127	"	"	"	2.33	2.17	2.12	2.21
132	"	"	"	2.46	2.98	3.26	2.90
133	"	"	"	2.54	2.70	2.24	2.49
134	"	"	"	2.22	2.30	2.51	2.34
135	"	"	"	2.48	2.38	1.77	2.21
138	"	"	"	2.41	2.52	2.31	2.41
139	"	"	"	2.61	2.57	2.46	2.55
140	"	"	"	2.59	2.54	2.04	2.39
141	"	"	"	2.20	2.23	2.19	2.21
143	"	"	"	2.52	2.34	2.41	2.42

58

RAMIE VARIETY TESTS IN THE FIBER NURSERY OF THE EVERGLADES EXPERIMENT STATION 1949.

(3) Yield of Mechanically decorticated fiber Pounds per acre.

Plot No.	Variety			1 Harvest	2 Harvest	3 Harvest	Total
R 2	Boehmeria	Nivea	Clove B	165	338	152	655
3	"	"	Clove C	317	601	293	1211
5	"	"	Clove E	746	749	444	1939
6	"	"	P.I. 70971	434	594	402	1430
8	"	"	21952	233	379	186	798
9	"	"	15752	337	539	283	1159
10	"	"	De Francia	433	752	333	1518
11	"	"	Americana	455	779	305	1539
12	"	"		547	882	403	1832
13	"	"	Louisiana Common	466	575	349	1390
14	"	"		462	724	275	1461
15	"	"		318	633	260	1211
16	"	Utilis		297	785	220	1302
17	"	Nivea	Usitatissima	410	608	261	1279
20	"	"	P.I. 159363	517	830	432	1779
21	"	"	P.I. 159364	451	707	278	1436
22	"	"	P.I. 159365	639	1070	320	2029
23	"	"	P.I. 159366	762	1219	380	2361
24	"	"	Highland, Jamaica	753	645	354	1752
25	"	"	Lowland Jamaica	760	965	434	2159
147	"	"	P.I. 162935	790	1317	631	2738
148	"	"	P.I. 162936	822	1302	625	2749
149	"	"	P.I. 162937	692	1053	497	2242
150	"	"	P.I. 162938	692	1103	527	2322
151	"	"	P.I. 162939	604	1149	486	2239
152	"	"	P.I. 162940	618	873	365	1856
153	"	"	P.I. 162941	656	1119	522	2297
154	"	"	P.I. 162942	503	823	353	1679
156	"	"	P.I. 162944	645	1047	481	2173
157	"	"	P.I. 162945	711	1185	588	2484
	"	"	Brazil		815	599	
——	"	"	P.I. 87521	866	1049	532	2447
——			Commercial				

RAMIE VARIETY TESTS IN THE FIBER NURSERY OF THE EVERGLADES EXPERIMENT STATION 1949 CONT'D

Plot No.	Variety			1 Harvest	2 Harvest	3 Harvest	Total
R 103	Boehmeria	Nivea	Selection from	591	907	396	1894
104	"	"	P.I. 87521	786	1044	471	2301
105	"	"	"	584	773	530	1887
106	"	"	"	727	950	614	2291
109	"	"	"	639	772	833	2294
110	"	"	"	876	745	629	2250
111	"	"	"	830	1315	515	2660
112	"	"	"	823	1167	460	2450
113	"	"	"	999	968	668	2635
114	"	"	"	875	1061	575	2511
115	"	"	"	784	802	556	2142
116	"	"	"	664	712	556	1932
117	"	"	"	893	919	466	2278
120	"	"	"	745	1158	369	2272
121	"	"	"	656	1116	556	2328
122	"	"	"	715	1114	681	2510
123	"	"	"	320	1273	316	1909
124	"	"	"	621	1092	205	1918
125	"	"	"	887	1302	417	2606
127	"	"	"	738	1095	497	2330
132	"	"	"	690	1164	326	2180
133	"	"	"	815	1246	711	2772
134	"	"	"	795	1026	364	2185
135	"	"	"	780	1086	543	2409
138	"	"	"	627	826	803	2256
139	"	"	"	701	975	701	2377
140	"	"	"	810	935	658	2403
141	"	"	"	880	1088	631	2599
143	"	"	"	651	803	564	2018

RAMIE PRODUCED IN FLORIDA IN 1949

Producer:	Acreage	Lbs. Dry China grass
Newport Industries, Inc. Canal Point, Fla.	1250	700,000 (Approx.)

RESULTS OF MISCELLANEOUS FIBER PLANTINGS IN FIBER NURSERY EVERGLADES EXPERIMENT STATION 1949

Plot No.	Date Planted	Age at Harvest Days	Name of Plant	P.I. or F.C. Number	% Retted Fiber Total green weight	Green Stalk Weight	Height mature Plant Inches
1	6/16/49	118	Crotalaria Juncea	F.C. 31758	2.66	4.81	75
3	6/16/49	118	Crotalaria Juncea	P.I. 167897	1.66	2.56	90
4	6/16/49	118	Corchorus Capsularis	P.I. 167092	3.28	4.47	87
7	6/16/49	118	" "	P.I. 170313	3.02	4.27	90
8	6/16/49	118	" "	P.I. 170315	2.84	4.08	87
9	6/16/49	118	" "	P.I. 170316	3.36	4.75	87
10	6/16/49	118	" "	P.I. 167895	2.97	4.26	93
51	9/1/49	120	" "	P.I. 180019		3.58	66
57	9/1/49	120	" "	P.I. 181235	—	3.97	66
58	9/1/49	120	" "	P.I. 180034	—	3.19	67
59	9/1/49	120	" "	P.I. 180045	—	3.90	68
60	9/1/49	120	" "	P.I. 181236	—	4.05	66
61	9/1/49	120	" "	P.I. 181237	—	3.43	67
62	9/1/49	120	" "	P.I. 181238	—	3.76	69
14	6/16/49	118	Corchorus Olitorius	P.I. 170314	2.94	4.02	86
63	9/1/49	123	" "	P.I. 180025		2.78	50
64	9/1/49	123	" "	P.I. 180035	—	2.62	54
66	9/1/49	121	" "	P.I. 181239	—	2.90	54
67	9/1/49	124	" "	P.I. 181240	—	3.74	51
68	9/1/49	124	" "	P.I. 181241	—	5.36	50
69	9/1/49	124	" "	P.I. 181242	—	4.05	48
17	6/17/49	117	Hibiscus Cannabinus	P.I. 167094	2.65	3.78	90
18	6/17/49	117	" "	P.I.167283	2.87	3.87	93
21	6/17/49	117	" "	P.I. 173211	3.31	4.25	78
77	9/1/49	125	" "	P.I. 180041		2.79	88
74	9/1/49	125	Hibiscus Sabdariffa	P.I. 180026	—	2.51	50

MISCELLANEOUS FIBER PLANTS, FIBER NURSERY, EVERGLADES EXPERIMENT STATION, 1949.

Plot No.	Date Planted	Name of Plant	Type, P.I. or F.C. Number
1	6/16/49	Crotalaria juncea	F.C. 31758
2	6/16/49	Crotalaria intermedia	F.C. 23401
3	6/16/49	Crotalaria juncea	P.I. 167897
4	6/16/49	Corchorus capsularis	P.I. 167092
5	6/16/49	" "	P.I. 167271
6	6/16/49	" "	P.I. 167300
7	6/16/49	" "	P.I. 170313
8	6/16/49	" "	P.I. 170315
9	6/16/49	" "	P.I. 170316
10	6/16/49	" "	P.I. 167895
11	6/16/49	Corchorus olitorius	P.I. 167060
12	6/16/49	" "	P.I. 167091?
13	6/16/49	" "	P.I. 167294
14	6/16/49	" "	P.I. 170314
15	6/16/49	" "	P.I. 170317
16	6/16/49	" "	P.I. 167896
17	6/17/49	Hibiscus cannabinus	P.I. 167094
18	6/17/49	" "	P.I. 167283
19	6/17/49	" "	P.I. 170433
20	6/17/49	" "	P.I. 170434
21	6/17/49	" "	P.I. 173211
22	6/17/49	" "	P.I. 173212
23	6/17/49	" "	P.I. 173213
24	6/17/49	" "	P.I. 173214
25	6/17/49	" "	P.I. 173215
26	6/17/49	" "	P.I. 173216
27	6/17/49	" ""	P.I. 173217
28	6/17/49	" "	P.I. 173218
29	6/17/49	" "	P.I. 173219
30	6/17/49	" "	P.I. 173220
31	6/17/49	" "	P.I. 173221
32	6/17/49	" "	P.I. 173222
33	6/17/49	" "	P.I. 173223
34	6/17/49	" "	P.I. 173224
35	6/17/49	" "	P.I. 173225
36	6/17/49	" "	P.I. 173226
37	6/17/49	" "	P.I. 173227
38	6/17/49	" "	P.I. 167898
39	6/17/49	Hibiscus sabdarriffa	P.I. 173228
40	6/17/49	" "	P.I. 173229
41	6/17/49	Abutilon theophrasti	P.I. 167086
42	6/17/49	" "	P.I. 170186
43	6/17/49	Sesbania canabina	P.I. 167899
44	6/17/49	Linum usitatissimum	Ordinary
45	6/17/49	" "	Cascade
46	6/17/49	" "	Redwing
47	6/17/49	Cannabis sativa	
48	6/24/49	Urena lobata	
49	6/24/49	Sansevieria trifasciata	
50	9/1/49	Corchorus capsularis	P.I. 172807
51	9/1/49	" "	P.I. 180019
52	9/1/49	" "	P.I. 180020
53	9/1/49	" "	P.I. 180021
54	9/1/49	" "	P.I. 180022
55	9/1/49	" "	P.I. 180023
56	9/1/49	" "	P.I. 180024
57	9/1/49	" "	P.I. 181235
58	9/1/49	" "	P.I. 180034
59	9/1/49	" "	P.I. 180045

MISCELLANEOUS FIBER PLANTS, FIBER NURSERY, EVERGLADES EXPERIMENT STATION, 1949.

Plot No.	Date Planted	Name of Plant		Type, P.I. or F.C. Number
60	9/1/49	Corchorus capsularis		P.I. 181236
61	9/1/49	"	"	P.I. 181237
62	9/1/49	"	"	P.I. 181238
63	9/1/49	Corchorus olitorius		P.I. 180025
64	9/1/49	"	"	P.I. 180035
65	9/1/49	"	"	P.I. 180046
66	9/1/49	"	"	P.I. 181239
67	9/1/49	"	"	P.I. 181240
68	9/1/49	"	"	P.I. 181241
69	9/1/49	"	"	P.I. 181242
70	9/1/49	Sansevieria sp.		
71	9/1/49	Hibiscus esculentus		P.I. 180017
72	9/1/49	"	"	P.I. 180032
73	9/1/49	"	"	P.I. 180044
74	9/1/49	Hibiscus subdarriffa		P.I. 180026
75	9/1/49	"	"	P.I. 180042
76	9/1/49	"	"	P.I. 180048
77	9/1/49	Hibiscus cannabinus		P.I. 180041
78	9/1/49	Plantago sff.		P.I. 180049
79	9/1/49	Sida rhombifolia		P.I. 180029
80	9/1/49	"	"	P.I. 180043
81	9/1/49	Crotalaria juncea		P.I. 176842
82	9/1/49	"	"	P.I. 180036
83	9/1/49	"	"	P.I. 180037
84	9/1/49	"	"	P.I. 180038
85	9/1/49	"	"	P.I. 180039
86	9/1/49	"	"	P.I. 180040
87	9/1/49	"	"	P.I. 180047
88	9/1/49	Phormium tenax		P.E.I. 183273
89	9/1/49	"	"	P.E.I. 183274
90	9/1/49	"	"	P.E.I. 183275
91	9/1/49	"	"	P.E.I. 183276
92	9/1/49	"	"	P.E.I. 183277
93	9/1/49	"	"	P.E.I. 183278
94	9/1/49	Musa textilis		P.I. 183976
95	9/1/49	Ananas magdalenaceae		P.I. 159310

Nitrogen Fertilizer Experiment on Kenaf at Vero Beach — Harvested 11/3/49

Plot No.	Plant Height Ins.	Percent Stalks of green Wt.	Percent Leaves of green Wt.	Yield of Total Green Material Tons per acre	Percent Retted Fiber		Yield of Retted Fiber pounds per acre
					Green Wt.	Stalk Wt.	
Control							
7	75	76.3	23.7	7.08	5.63	7.38	797
13	78	77.8	22.2	10.35	5.88	7.55	1217
20	92	77.9	22.1	11.62	5.62	7.21	1306
	82	77.3	22.7	9.67	5.71	7.38	1107
30 pounds Nitrogen per acre as Nitrate of Soda							
4	90	79.3	20.7	11.43	5.61	7.08	1283
12	87	80.4	19.6	9.98	6.24	7.76	1246
24	93	81.9	18.1	15.06	5.87	7.17	1769
	90	80.5	19.5	12.16	5.91	7.34	1433
60 pounds Nitrogen per acre as Nitrate of Soda							
9	96	79.8	20.2	14.16	5.59	7.00	1583
16	99	80.5	19.5	13.61	5.02	6.23	1367
22	87	80.4	19.6	11.62	5.73	7.13	1331
	94	80.2	19.8	13.12	5.45	6.79	1427
30 pounds Nitrogen per acre as Uramon							
3	84	79.5	20.5	9.98	5.86	7.37	1170
10	90	80.8	19.2	15.06	6.08	7.53	1832
25	89	79.5	20.5	15.97	4.88	6.14	1559
	88	79.9	20.1	13.67	5.61	7.01	1520
60 pounds Nitrogen per acre as Uramon							
1	90	83.0	17.0	14.70	6.32	7.61	1858
14	78	81.2	18.8	11.43	5.77	7.11	1320
26	86	80.4	19.6	13.43	5.72	7.12	1537
	85	81.5	18.5	13.20	5.94	7.28	1572

Nitrogen Fertilizer Experiment on Kenaf at Vero Beach (con't.)

Plot No.	Plant Height Ins.	Percent Stalks of green Wt.	Percent Leaves of green Wt.	Yield of Total Green Material Tons per acre	Percent Retted Fiber Green Wt.	Percent Retted Fiber Stalk Wt.	Yield of Retted Fiber pounds per acre
30 pounds Nitrogen per acre as Millorganite							
8	90	78.6	21.4	10.71	5.31	6.76	1137
15	76	80.4	19.6	11.07	5.40	6.72	1196
21	86	77.5	22.5	10.53	5.48	7.07	1154
	84	78.8	21.2	10.76	5.40	6.85	1162
60 pounds Nitrogen per acre as Millorganite							
6	82	80.3	19.7	9.08	5.24	6.53	951
11	84	78.8	21.2	10.35	5.67	7.20	1173
27	89	78.6	21.4	11.62	5.82	7.40	1352
	85	79.2	20.8	10.35	5.58	7.04	1159
30 pounds Nitrogen per acre as mixture of 1/3 Nitrate of Soda, 1/3 Uramon and 1/3 Millorganite							
2	87	81.6	18.4	13.43	6.19	7.58	1663
18	93	80.6	19.4	13.98	5.68	7.04	1588
23	81	82.6	17.4	9.98	5.81	7.03	1160
	87	81.6	18.4	12.47	5.89	7.22	1470
60 pounds Nitrogen per acre as mixture of 1/3 Nitrate of Soda, 1/3 Uramon and 1/3 Millorganite							
5	90	75.0	25.0	11.80	5.25	7.00	1239
17	88	78.7	21.3	13.25	5.46	6.95	1447
19	94	79.4	20.6	15.43	6.37	8.03	1967
	91	77.7	22.3	13.49	5.69	7.33	1551
60 pounds Nitrogen per acre as Sulphate of Ammonia							
28	86	77.5	22.5	11.25	4.84	6.24	1089
60 pounds Nitrogen per acre as Uraform 0-8							
29	87	82.0	18.0	13.79	5.39	6.58	1487

DECORTICATION OF YUCCA ON JAPANESE HAND MACHINE

10 November, 1949 Two samples, clearance & RPM unknown

Name	Location	Sample No.	Weight of Leaves		Dry Fiber	% Yield		Tow	% Tow	Average Length of Leaves
			When picked	When received		To Picked weight	To rec'd weight			
Mixture of Yucca elata & Y. glauca	California	---		390.0 gr.	74.5 gr.		19.1 %	20.0 gr.	21.2 %	
Yucca Schidigera	California			898.0	48.0		5.35	47.5	49.7	

29 November, 1949 Clearance .011" for closest blade to .018" for widest. Motor speed = 840 rpm

Name	Location	Sample No.	Weight of Leaves		Dry Fiber	% Yield		Tow	% Tow	Average Length of Leaves
			When picked	When received		To Picked weight	To Rec'd Weight			
Yucca Arizonica	Baboquivari Mts. Arizona	2a	365.8 gr.	313.0 gr.	32.5 gr.	8.9 %	10.4 %	6.5 gr.	16.7 %	18"
"	"	2aa	379.1	358.0	36.5	9.6	10.2	9.0	19.8	17 3/4"
"	"	2d	322.8	302.5	30.5	9.45	10.1	6.0	16.4	17"
"	"	dd	331.5	one leaf used to set machine 318. gr. decorticated	31.5		9.9	11.0	25.9	18"

66

Decortication of Yucca on Japanese Hand Machine

1 December, 1949 Clearance .011" for closest blade to .018" for widest. Rotor speed = 800 rpm

Name & Date of Harvest	Location	Sample No.	Weight of Leaves		Dry Fiber	% Yield		Tow	% Tow	Average Length of Leaves
			When picked	When received		To Picked weight	To Rec'd weight			
Yucca Arizonica 20 Nov.	Baboquivari Mts. Arizona	1a	375.6 gr.	340.5 gr.	39.0 gr.	10.4 %	11.5 %	7.0 gr.	15.2 %	17"
" " 20 Nov.	"	1aa	390.2	354.0	35.5	9.1	10.0	10.5	22.8	18½"
" " 20 Nov.	"	1d	337.2	283.5	29.5	8.8	10.4	6.0	16.9	18½
" " 20 Nov.	"	1dd	346.0	351.5	39.0	8.4	11.1	9.5	19.6	17"
" " 21 Nov.	Nogales, Arizona	3a	390.3	345.5	39.0	10.0	11.3	8.5	17.9	20"
" " 21 Nov.	"	3aa	357.5	331.0	37.5	10.5	11.3	8.0	16.8	19"
" " 21 Nov.	"	3d	380.2	352.5	41.0	10.8	11.6	5.0	10.9	18½"
" " 21 Nov.	"	3dd	384.4	357.0	45.0	11.7	12.6	6.0	11.8	18½"
" " 21 Nov.	"	4a	423.2	381.0	48.0	11.3	12.6	10.0	17.2	18"
" " 21 Nov.	"	4aa	416.3	364.5	45.5	10.9	12.5	8.5	15.7	19½"
" " 21 Nov.	"	4d	365.2	344.0	42.5	11.6	12.4	6.0	12.4	17½"
" " 21 Nov.	"	4dd	348.1	326.0	41.5	11.9	12.7	5.0	10.7	18½"
Yucca Arizonica x baccata thornberi) 22 Nov.	Mt. Vie Arizona	5a	583.8	492.0	65.0	11.1	13.2	8.	11.0	22"

Decortication of Yucca on Japanese Hand Machine

1 Dec. (cont'd) Clearance .011" - .018". Rotor speed = 800 rpm

Name & Date of Harvest	Location	Sample No.	Weight of Leaves		Dry Fiber	% Yield		Tow	% Tow	Average Length of Leaves
			When picked	When received		To Picked weight	To Rec'd weight			
Yucca Arizonica x baccata (y. thornberi) 22 Nov.	Mt. View, Arizona	5aa	588.9 gr.	538.2 gr.	64.0 gr.	10.9 %	11.9 %	10.5 gr.	14.1 %	22"
" " 22 Nov.	" "	5d	550.6	538.0	78.0	14.2	14.5	6.0	7.2	22"
" " 22 Nov.	" "	5dd	527.2	489.0	76.0	14.4	15.5	6.0	7.3	22"
" " 22 Nov.	Benson, Arizona	6a	647.4	590.2	86.5	13.4	14.6	9.5	9.9	24"
" " 22 Nov.	" "	6aa	663.5	562.0	82.5	12.4	14.7	7.5	8.3	24"
" " 22 Nov.	" "	6d	601.8	554.0	85.0	14.1	15.4	7.0	7.6	25"
" " 22 Nov.	" "	6dd	605.5	625.0	87.5	14.4	14.0	8.5	8.9	24"

6 December, 1949 Clearance .014" for closest blade to .021" for widest. Rotor speed = 800 rpm

Yucca baccata-torregi 25 Nov.	Aden Volcano, New Mexico	9a	1443.6	1229.5	163.5	11.3	13.3	14.5	8.2 %	30"
" " 25 Nov.	" "	9aa	1359.2	1175.0	166.0	12.2	14.1	16.5	9.1	30"
" " 25 Nov.	" "	9d	1376.9	1200.0	155.5	11.3	13.0	16.0	9.3	31"
" " 25 Nov.	" "	9dd	1439.5	1218.5	165.5	11.5	13.6	11.0	6.2	31½"

Decortication of Yucca on Japanese Hand Machine

7 December, 1949 Clearance .013" for closest blade to .019" for widest. Rotor speed,800 rpm

Name & Date of Harvest	Location	Sample No.	Weight of Leaves		Dry Fiber	% yield		Tow	% Tow	Average Length of Leaves
			When picked	When received		To Picked weight	To Rec'd weight			
Yucca elata 24 Nov.	Las Cruces, New Mexico	7a	263.7 gr.	226.0 gr.	53.5 gr.	20.3 %	23.6 %	6.5 gr.	10.8 %	21½"
" " 24 Nov.	" "	7aa	255.7	224.5	52.0	20.4	23.1	6.5	11.1	21½"
" " 24 Nov.	" "	7d	233.3	195.5	49.5	21.2	25.3	5.5	10.0	20"
" " 24 Nov.	" "	7dd	221.8	193.5	51.5	24.3	26.6	4.5	8.1	19½"
" " 25 Nov.	Aden, New Mexico	8a	251.0	173.0	51.0	20.3	29.5	10.5	17.1	22½"
" " 25 Nov.	" "	8aa	240.6	169.5	54.0	22.4	31.8	6.0	10.0	22½"
" " 25 Nov.	" "	8d	356.8	273.5	81.5	22.8	29.8	11.5	12.4	27"
" " 25 Nov.	" "	8dd	310.5	248.0	70.0	22.5	28.2	9.5	12.0	24½"
" " 27 Nov.	Jeurnada, New Mexico	10 a	202.4	173.0	48.5	24.0	28.0	7.0	12.6	21"
" " 27 Nov.	" "	10aa	215.4	190.5	50.5	23.5	26.5	7.0	12.2	21½"
" " 27 Nov.	" "	10d	244.7	225.0	54.0	22.1	24.0	9.0	14.3	21"
" " 27 Nov.	" "	10dd	308.5	270.	73.0	23.6	27.0	10.5	12.6	25"
" " 27 Nov.	" "	11a	292.4	255.	57.0	19.5	22.4	8.0	12.3	21"

69

7 Dec. (cont'd) Clearance .013" - .019". Rotor Speed = 800 rpm

Name & Date of Harvest	Location	Sample No.	Weight of Leaves		Dry Fiber	% Yield		Tow	% Tow	Average Length of Leaves
			When picked	When received		To Picked weight	To Rec'd weight			
Yucca elata 27 Nov.	Journada, New Mexico	11aa	284.5 gr.	258.0 gr.	59.0 gr.	20.7 %	22.9 %	8.0 gr.	11.9 %	20½"
" " 27 Nov.	" "	11d	395.2	353.0	75.5	19.1	21.4	13.	14.7	21"
" " 27 Nov.	" "	11dd	338.0	294.	77.	22.8	26.2	9.5	11.0	22"

8 & 9 December, 1949 Clearance .016" for closest blade to .022" for widest. Rotor speed = 800 rpm

Name & Date of Harvest	Location	Sample No.	When picked	When received	Dry Fiber	To Picked weight	To Rec'd weight	Tow	% Tow	Average Length of Leaves
Yucca foxoriana 30 Nov.	Chispa, Texas	12a	1329.2	1197.	133.	10.0	11.1	25.5	16.1	27"
" " 30 Nov.	" "	12aa	1342.8	1230.	149.5	11.1	12.2	15.0	9.2	25"
" " 30 Nov.	" "	12d	1254.1	1148.	137.	10.9	11.9	18.5	11.9	26"
" " 30 Nov.	" "	12dd	1208.3	1126.	131,5	10.9	11.7	23.5	15.2	27"
" " 30 Nov.	" "	13a	1368.4	1250.	152.	11.1	12.2	13.5	8.2	25"
" " 30 Nov.	" "	13aa	1281.4	1180.	136.	10.6	11.5	16.	10.2	26"
" " 30 Nov.	" "	13d	1353.3	1260.	155.	11.5	12.3	26.5	14.6	26"
" " 30 Nov.	" "	3dd	1397.6	1288.	146.	10.5	11.3	33.	18.4	27"

Decortication of Yucca on Japanese Hand Machine

8 & 9 Dec. (cont'd) Clearance .016" to .022". Rotor Speed = 800 rpm

Name & Date of Harvest	Location	Sample No.	Weight of Leaves		Dry Fiber	% Yield		Tow	% Tow	Average Length of Leaves
			When Picked	When received		To Picked weight	To Rec'd weight			
Yucca foxoriana 1 Dec.	Allamore, Texas	14a	1365.8 gr.	1285. gr.	113. gr.	8.3 %	8.8 %	28. gr.	19.9 %	22"
" " 1 Dec.	" "	14aa	1301.0	1210.	115.5	8.9	9.6	24.5	17.5	20"
" " 1 Dec.	" "	14d	1158.4	1103.	109.	9.4	9.9	21.	16.2	22"
" " 1 Dec.	" "	14dd	1129.8	1084.	95.5	8.5	8.8	30.5	24.2	22"
Y. foxoriana & torregi 1 Dec.	" "	15a	1226.3	1137.	120.	9.8	10.6	28.0	18.9	28"
" " 1 Dec.	" "	15aa	1067.4	974.	116.5	10.9	12.0	27.0	18.8	25"
" " 1 Dec.	" "	15d	1164.1	1073.	133.	11.4	12.4	25.	15.8	27"
" " 1 Dec.	" "	15dd	1231.1	1148.	145.	11.8	12.6	38.	20.7	25"
Yucca torregi 1 Dec.	" "	16a	958.0	882.	115.5	12.1	13.1	22.	16.0	28"
" " 1 Dec.	" "	16aa	861.6	798.	112.5	13.1	14.1	24.	17.6	28"
" " 1 Dec.	" "	16d	1013.3	929.	138.5	13.7	14.9	24.	14.8	27.5"
" " 1 Dec.	" "	16dd	859.3	805.	121.	14.1	15.0	20.	14.2	28"

Decortication of Yucca on Japanese Hand Machine

13 December, 1949 Clearance .011" for closest blade to .018" for widest. Rotor = 800 rpm

Name & Date of Harvest	Location	Sample No.	Weight of Leaves		Dry Fiber	% Yield		Tow	% Tow	Average Length of Leaves
			When picked	When received		To Picked weight	To Rec'd weight			
Yucca elata 2 Dec.	Van Horn, Texas	17a	225.4 gr.	201. gr.	48. gr.	21.3 %	23.9 %	5. gr.	9.4 %	18"
" " 2 Dec.	" "	17aa	228.9	206.5	51.5	22.5	25.0	5.	8.9	19"
" " 2 Dec.	" "	17d	354.6	320.0	79.5	22.4	24.8	11.	12.3	21"
" " 2Dec.	" "	17dd	340.5	299.5	78.	22.9	26.0	10.	11.4	22"

14 & 15 December, 1949 Clearance .011" to .018". Rotor Speed = 800 rpm

Yucca elata 2 Dec.	Sierra Blanca, Texas	18a	245.9	218.5	58.5	23.8	26.8	4.5	7.1	19"
" " 2 Dec.	" "	18aa	245.6	216.	55.5	22.6	25.7	5.0	8.3	21"
" " 2 Dec.	" "	18d	296.2	265.5	66.0	22.3	24.9	8.0	10.8	22"
" " 2 Dec.	" "	18dd	294.8	260.	72.0	24.4	27.7	9.0	11.1	23"
" " 4 Dec.	Valmont, New Mexico	19a	181.0	152.5	37.	20.4	24.3	3.5	8.7	20"
" " 4 Dec.	" "	19aa	251.7	225.	52.5	20.9	23.3	5.0	8.7	22"
" " 4 Dec.	" "	19d	216.9	191.5	46.5	21.5	24.3	6.5	12.3	20½"

Decortication of Yucca on Japanese Hand Machine

14 & 15 December (Cont'd) Clearance .011" to .018". Rotor speed = 800 rpm

Name & Date of Harvest	Location	Sample No.	Weight of Leaves		Dry Fiber	% Yield		Tow	% Tow	Average Length of Leaves
			When picked	When received		To Picked weight	To Rec'd weight			
Yucca elata 4 Dec.	Valmont, New Mexico	19dd	296.5 gr.	261.5 gr.	66. gr.	22.3 %	25.3 %	4. gr.	5.7 %	21"
" " 6 Dec.	Deming, New Mexico	20a	250.1	226.5	53.5	21.2	23.6	7.	11.6	18"
" " 6 Dec.	" "	20aa	249.6	224.5	54.	21.6	24.0	6.5	10.7	19½"
" " 6 Dec.	" "	20d	282.8	260.	71.5	25.3	27.5	7.5	9.5	21"
" " 6 Dec.	" "	20dd	285.8	263.5	73.5	25.7	27.8	9.0	10.9	20½"
" " 7 Dec.	" "	22a	237.8	214.5	47.	19.8	21.9	6.5	12.1	19"
" " 7 Dec.	" "	22aa	245.0	221.5	53.5	21.8	24.2	8.0	13.0	19"
" " 7 Dec.	" "	22d	327.8	303.	76.	23.2	25.1	10.5	12.1	22"
" " 7 Dec.	" "	22dd	335.8	309.	72.5	21.6	23.4	14.0	16.2	21"
" " 7 Dec.	" "	24a	272.2	251.	63.	23.2	25.1	8.0	11.3	18"
" " 7 Dec.	" "	24aa	269.1	249.5	61.5	22.9	24.6	9.5	13.4	19½"
" " 7 Dec.	" "	24d	322.0	299.	75.	23.3	25.1	10.	11.8	19"
" " 7 Dec.	" "	24dd	317.1	291.	75.5	23.8	25.9	10.	11.7	22"

73

Decortication of Yucca on Japanese Hand Machine

14 & 15 December (cont'd) Clearance .011" to .018". Rotor speed = 800 rpm

Name & Date of Harvest	Location	Sample No.	Weight of Leaves		Dry Fiber	% Yield		Tow	% Tow	Average Length of Leaves
			When picked	When received		To Picked weight	To Rec'd weight			
Yucca elata 8 Dec.	Deming, New Mexico	25a	272.0 gr.	255.5 gr.	59.5 gr.	21.9 %	23.3 %	8.5 gr.	12.5 %	21"
" " 8 Dec.	" "	25aa	254.4	234.5	58.0	22.8	24.7	7.5	11.4	21"
" " 8 Dec.	" "	25d	301.8	285.5	68.	22.5	23.8	8.	10.5	20"
" " 8 Dec.	" "	25dd	286.5	271.	66.5	23.2	24.5	7.	9.5	20"

16 December, 1949 Clearance .011" for closest blade to .018" for widest. Rotor speed = 800 rpm

Name & Date of Harvest	Location	Sample No.	When picked	When received	Dry Fiber	To Picked weight	To Rec'd weight	Tow	% Tow	Average Length of Leaves
Yucca elata 7 Dec.	Deming, New Mexico	23a	273.8	245.	75.	27.4	30.6	7.5	9.1	19"
" " 7 Dec.	" "	23aa	281.8	252.	72.4	25.7	28.7	9.5	10.4	21"
" " 7 Dec.	" "	23d	313.9	292.	85.5	27.2	29.3	8.	8.6	18"
" " 7 Dec.	" "	23dd	316.9	290.	87.5	27.6	30.2	9.5	9.8	21"
" " 8 Dec.	" "	26a	320.4	292.	86.5	27.0	29.6	8.5	9.0	20"
" " 8 Dec.	" "	26aa	328.6	305.	88.5	26.9	29.0	11.	11.1	21"
" " 8 Dec.	" "	26d	435.9	404.	104.	23.9	25.8	14.5	12.2	21"
" " 8 Dec.	" "	26dd	426.8	395.	117.	27.4	29.6	14.	10.7	23"

Decortication of Yucca on Japanese Hand Machine

21 December, 1949 Clearance .011" for closest blade to .018" for widest. Rotor speed = 800 rpm

Name & Date of Harvest	Location	Sample No.	Weight of Leaves		Dry Fiber	% Yield		Tow	% Tow	Average Length of Leaves
			When picked	When received		To Picked weight	To Rec'd weight			
Yucca elata 6 Dec.	Deming, New Mexico	21a	284.5 gr.	228. gr.	62.5 gr.	22.0 %	27.4 %	14. gr.	18.3 %	21½"
" " 6 Dec.	" "	21aa	275.2	223.	62.5	22.7	28.0	10.5	14.4	21"
" " 6 Dec.	" "	21d	357.5	302.	96.	26.8	31.8	10.	9.4	22"
" " 6 Dec.	" "	21dd	365.5	301.	99.5	27.2	33.	13.	11.6	23"
" " 8 Dec.	" "	27a	242.0	214.	51.5	21.3	24.1	4.	7.2	20"
" " 8 Dec.	" "	27aa	273.6	245.	66.	24.1	26.9	6.5	9.0	21"
" " 8 Dec.	" "	27d	298.2	261.	73.	24.4	28.0	8.	9.9	21½"
" " 8 Dec.	" "	27dd	324.2	289.	83.	25.6	28.7	11.	11.7	23"

Note: A small Wisconsin motor, model AK, was used to power decorticator and some reduction in speed resulted as leaf was inserted. This speed reduction amounted to from 50 to 100 rpm from the maximum 800 rpm and depended on size of leaf.

All samples were hand washed and sun dried except the group on 16 December, No. 23a, aa, d, dd, and 26a, aa, d, dd, which were sun dried without washing.

The %Tow was figured as the ratio of Tow to the sum of Tow + Dry Fiber.

ADDITIONAL INTRODUCTIONS IN NURSERY GARDEN NOT SHOWN/ON 1949 Sheet.
Mostly 1948 introductions.

RAMIE:

PI Nos. 162934-162945 inclusive from Java. All of these varieties have given good germination and plants from all are being carried forward at present time.

PI 170253 and PI 180033. The first from Turkey the latter from India. PI 180018. from ~~Manipur~~ I$_n$dia. Planted in greenhouse in Sept. 1949. Good germination and plants obtained from all 3 varieties.

Commercial ramie variety at Newport's is P.I. 87521 introduced about1935.

Sansevieria:

P.I. 183561, from Pretoria, South Africa. Nn.germination
P.Q. X14083 Ethiopia. No germination
PI. 182787 from Costa Rica-Some germination
PI. 183562,Union of South Africa-some germination
PI. 184383, from Zomba Nyasaland, Africa. No germination

Furcraea sp.

P.I. 182789, some plants growing
P.I. 182786, some plants growing

Ananas magdalenae

P.I. 159310, A few plants living, but very poor.

C O P Y

Prepared by C. C. Seale & J. Frank Joyner
September 1949

FIBER CROP INVESTIGATIONS

State Project 206

Agronomic Studies

Fiber Nursery

During the 1948-49 season several different types of fibers were planted in the Fiber Nursery at the Everglades Experiment Station to test their adaptability to the Everglades peat soils in South Florida.

The following types of fibers were included in these plantings: hemp (*Cannabis sativa* L.), jute (*Corchorus capsularis* L. and *C. olitorius* L.), crotalaria (*Crotalaria juncea* L and *C. intermedia*), kenaf (*Hibiscus cannabinus* L.), roselle (*Hibiscus sabdariffa* L.), sesbania (*Sesbania cannabina*), flax (*Linum usitatissimum* L.), malva blanca (*Urena lobata* L.), and sisal (*Agave sisalana* Perrine).

With the exception of flax, all of the seed for these plantings were obtained from different sources by Dr. B. B. Robinson, U. S. Department of Agriculture.

It is too early yet to predict the final results of these tests,but many of these new fiber plants are making very promising growth.

A few new varieties of *Sansevieria* have also been obtained from the same source, and have been planted on Leon fine sand in the fiber nursery at the Winchester Farm near Boynton.

In the nursery at Port Mayaca, on Davie fine sand, plantings are being maintained of several varieties of ramie. Phormium and sansevieria were also planted in this nursery, but the Phormium plants did not survive.

Ramie

(1) Variety Observation Plots

All of the varieties and selections of ramie obtained to date are being grown and observed in the fiber nurseries.

Data in respect to yield and quality of fiber is being obtained on most of these varieties this season.

(2) Variety Experiment

In February 1949, a ramie variety trial was planted on Everglades peat soil at Newport Industries, Inc., near Canal Point.

This experiment, which was laid out in randomized blocks replicated five times, was designed to test six promising varieties of ramie against the commercially grown standard variety, P.I. 87521

No field data has yet been obtained from this test.

(3) Fertilizer Experiments

In the spring of 1949 the following fertilizer experiments were laid out on ramie growing on Everglades peat soil on the lands of Newport Industries, Inc., near Canal Point.

(a) Phosphate - Potash Fertilizer Experiment

Phosphate and potash fertilizers were applied in this experiment at the rates of 30 and 60 pounds of $P_2$05, and 90 and 180 pounds of $K_2$0 per acre respectively in nine different treatment combinations in a randomized block layout replicated five times.

The results of the first harvest indicates that the yields of fiber and of total green plant material were greatly increased by the application of both potash and phosphate fertilizers.

In order to determine more accurately the fertilizer requirements of ramie growing under these conditions, soil and plant tissue tests are being conducted cooperatively on representative plot samples by the Chemistry Department of the Everglades Experiment Station.

(b) Nitrogen Fertilizer Experiment

Various types of organic and inorganic nitrogenous fertilizers are being applied in this experiment at different intervals during the seasons in order to determine whether any effects will be produced on the yield and quality of ramie fiber.

So far the results of the first harvest show no signigicant effects from any of the nitrogen treatments.

(c) Time of Application of Fertilizer Experiment

Fertilizer treatments comprising a mixture of phosphate, potash and trace elements were applied in whole and split applications at different intervals during the crop season. The purpose of this test is to determine the relative effects of the time of application of fertilizer on the yield and quality of ramie fiber.

This experiment was laid out in randomized blocks with five replications of each treatment.

An accurate evaluation of the treatment effects in this test will have to be obtained by a comparison both of the individual and combined results of the three harvests at the end of the season.

(d) NPK Fertilizer Experiment

A 3 x 3 x 3 factorial NPK fertilizer experiment involving the application of three levels of nitrogen, phosphate and potash in various treatment combinations has been laid out on a newly planted field of ramie.

No yield data has yet been obtained from this experiment, which will be harvested for the first time in September 1949.

Kenaf

(1) Strain Test

Fourteen strains of kenaf (*Hibiscus cannabinus* L.), obtained from Dr. J. E. Walker formerly with U. S. Department of Agriculture, are being tested this season for nematode resistance in the fiber nursery at the Everglades Experiment Station. Many of these strains show considerable signs of promise.

(2) NPK Fertilizer Experiment

A 2 x 2 x 2 factorial NPK fertilizer experiment was laid out on kenaf on Leon fine sand at the Winchester Farm in the summer of 1948.

The results of this test showed that the treatment with nitrogen produced a highly significant increase in the yield of kenaf fiber, which was approximately four times greater than the no-nitrogen treatment. Potash and phosphate also increased the yield of fiber, but to a much lesser extent. Furthermore the potash effect was greater than that of phosphate.

(3) Time of Planting Experiment

In the spring of 1949 a time of planting experiment on kenaf was put down in the fiber nursery of the Everglades Experiment Station. Five plantings were made in a 5 x 5 Latin square layout at approximately 15 day intervals during the period January 17 to March 14, 1949.

The object of this experiment was to determine the most suitable date of planting the crop for the production of seed.

Results showed that no seed production occurred when kenaf was planted after February 3, 1949.

Also even with the two earliest plantings seed productions were rather poor on the Everglades peat soil. By comparison much more seed was produced from two plantings of kenaf in January, 1949, on Leon fine sand at the Winchester Farm.

Sansevieria
Variety Plots

In 1949 two new and unidentified strains of Sansevieria were obtained from the U. S. Deparment of Agriculture, and were planted in the nursery at the Winchester Farm.

Sansevieria trifasciata, a cold resistant type, is being increased as rapidly as possible by means of leaf cuttings in the same nursery. During 1948 about 20,000 plants of this strain were set out on an area of about 1/2 acre.

Fertilizer Experiments

In April 1949 the following fertilizer experiments were laid out on Sansevieria trifasciata at the Winchester Farm:

(1) An NPK fertilizer experiment designed to compare the application of three levels of nitrogen, phosphate and potash in various treatment combinations in a 3 x 3 x 3 factorial design.

(2) A nitrogen experiment in which several different types of organic and inorganic nitrogenous treatments are being compared in a randomized block-layout replicated five times.

No results have yet been obtained from these experiments.

The following experiments laid out on Sansevieria guineensis in the spring of 1948 at the Winchester Farm are being carried on and will be harvested this year before any likelihood of frost damage:

(1) Trace elements experiment
(2) Phosphate rate test
(3) Fertilizer ratio test
(4) Nitrogen rate experiment
(5) pH study

Owing to frost damage, no yield data was obtained from these experiments in 1948, although quality studies were made on the fiber from selected leaf samples.

Two fertilizer tests, one at Fort Meyers and the other at Bradenton, on Sansevieria guineensis, were harvested in the winter of 1948-49.

The results of these tests showed that the yield of fiber was greater when Seminole cow peas were grown in association with the Sansevieria than when a 4-7-5 fertilizer mixture was applied at the rate of 3,000 pounds per acre.

Other Miscellaneous Fiber Plants

The plantings of sisal (Agave sisalana Perrine), furcraea (Furcraea gigantea Vent.) and henequen (Agave fourcroydes Lemaire) were injured by the hurricane and cold weather in 1948.

Tests on both sisal and furcraea show that fiber yield was about 4 percent on a green leaf weight basis for both fibers.

Tensile strength determinations carried out on the two fibers indicated that sisal was considerably stronger than furcraea.

A fertilizer test was put down on sisal at the Winchester Farm in April 1949. In this test the effects of several different kinds of nitrogenous fertilizers are being compared.